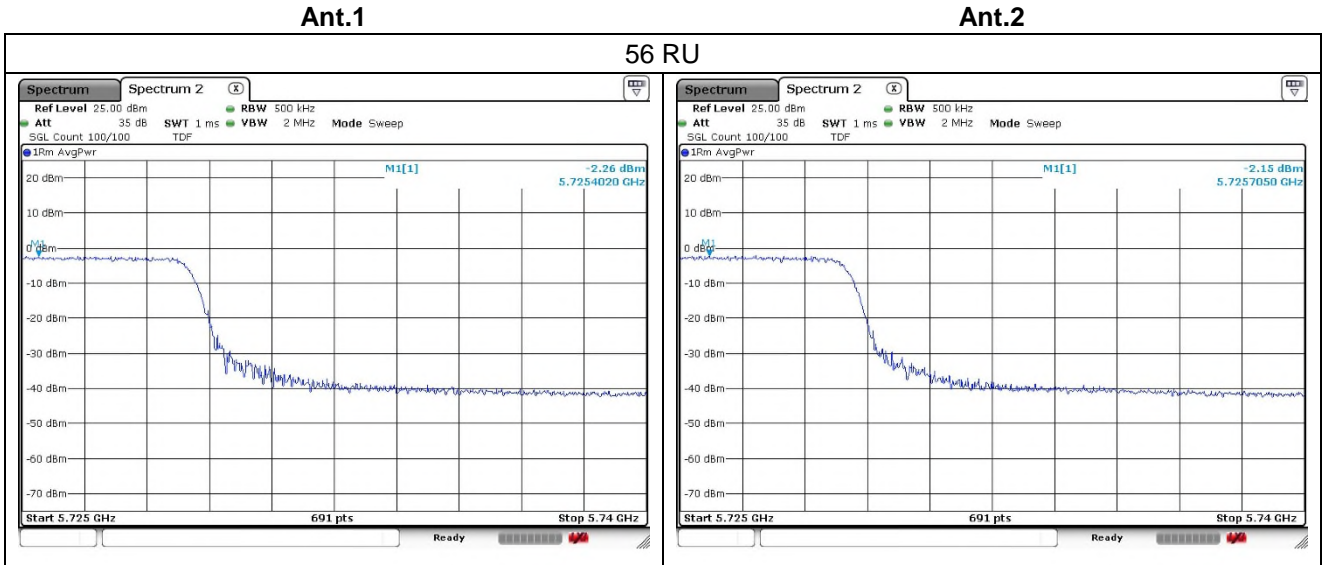
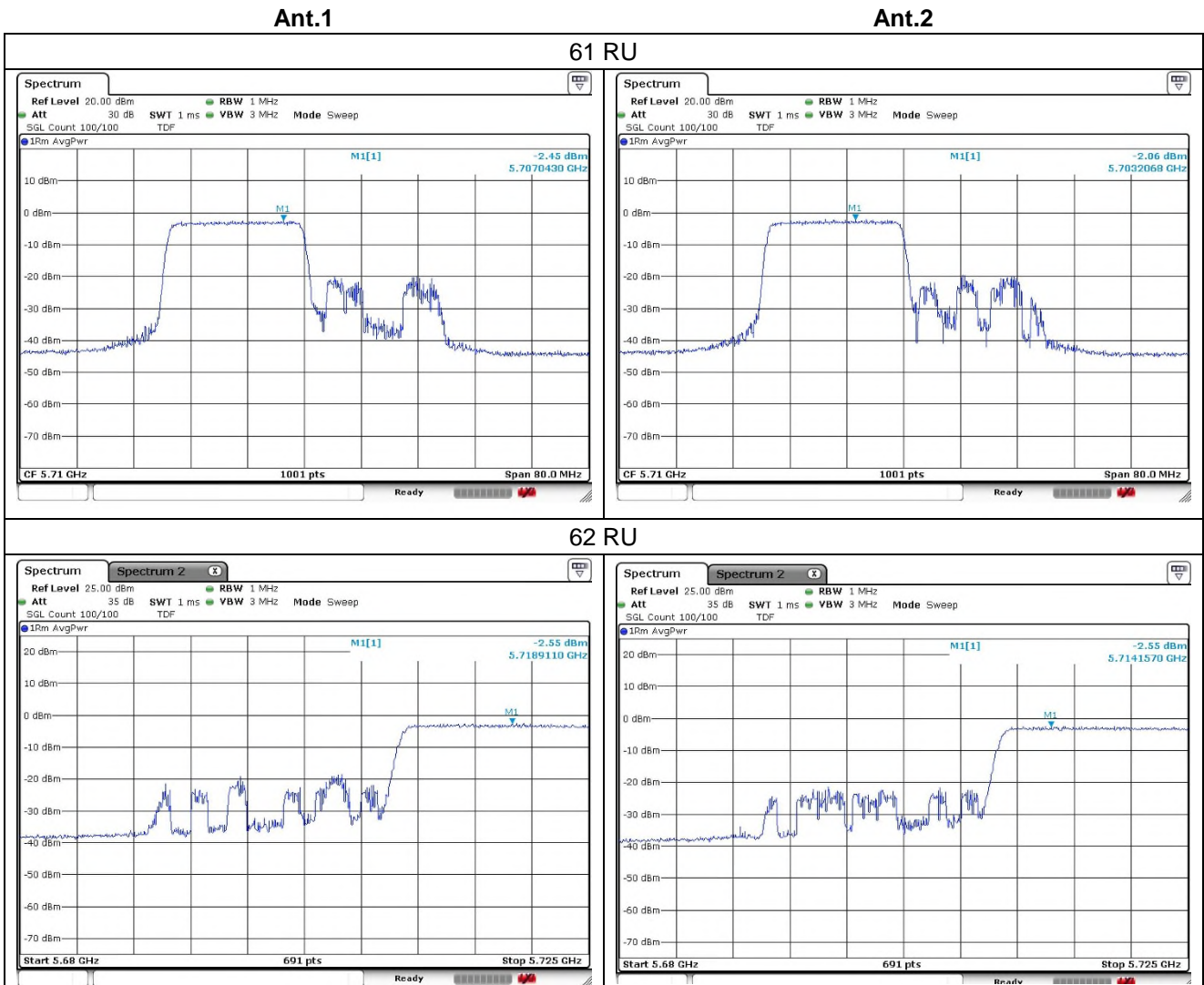


802.11ax_HE40 Band 3_Straddle channel_106T



802.11ax_HE40 Band 2C_Straddle channel_242T

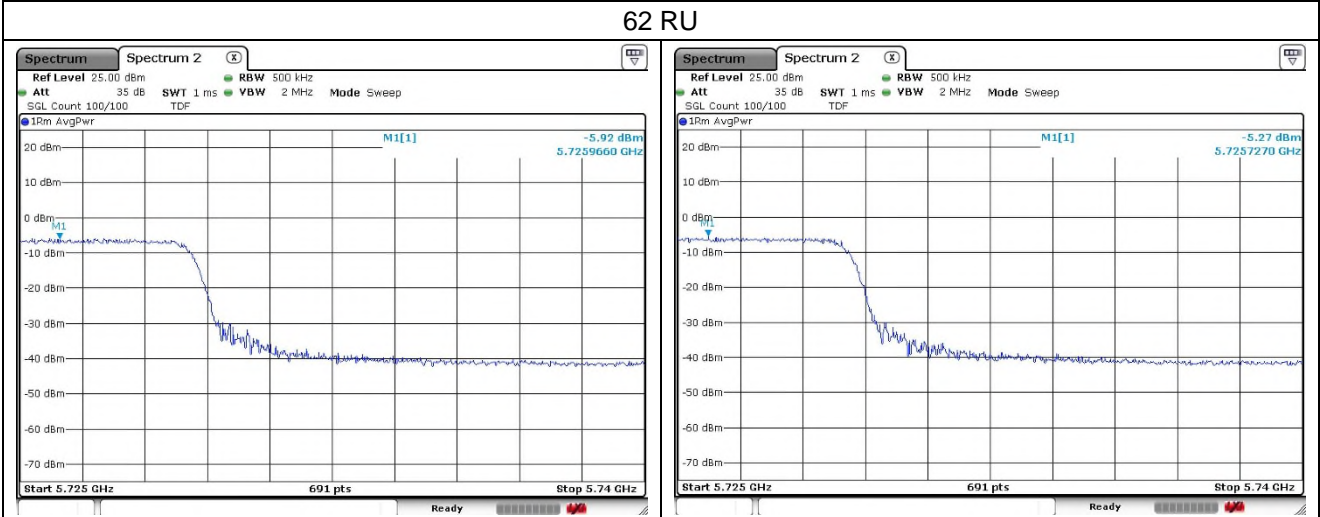


802.11ax_HE40 Band 3_Straddle channel_242T

Ant.1

Ant.2

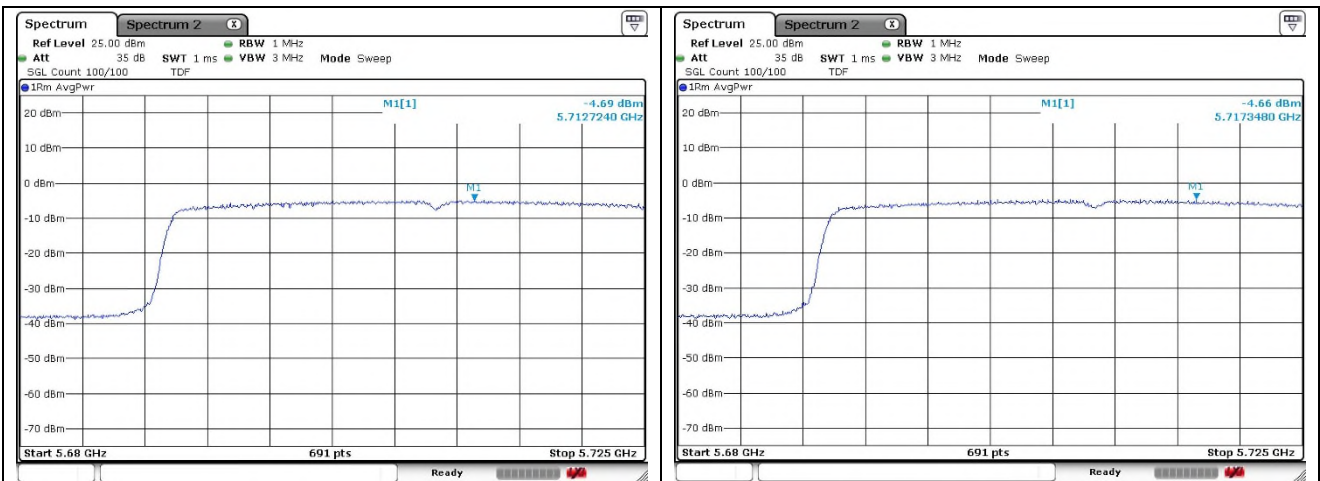
62 RU



802.11ax_HE40 Band 2C_Straddle channel_SU

Ant.1

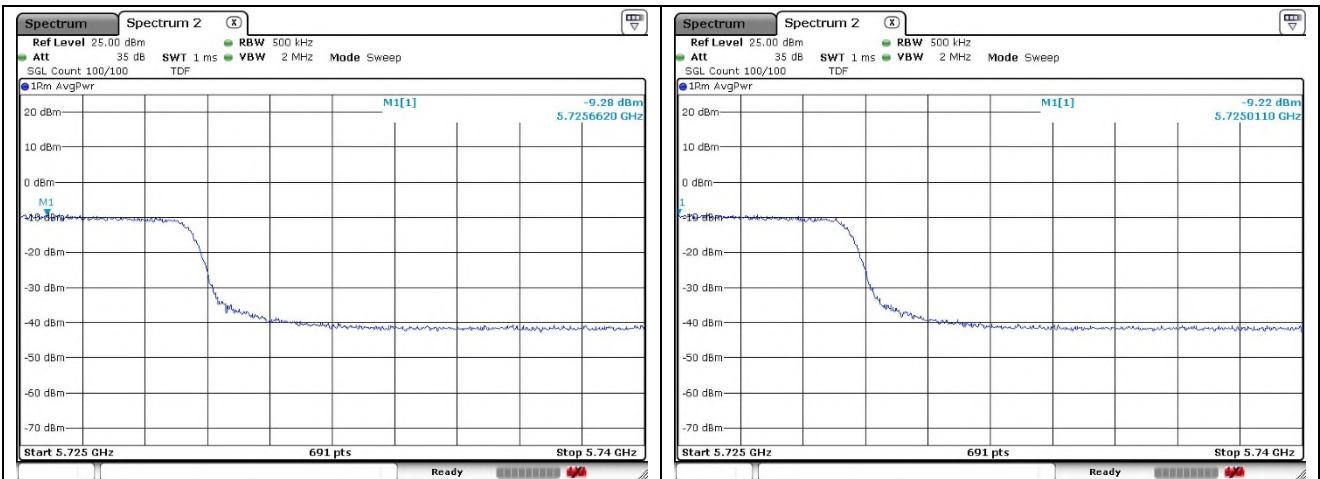
Ant.2



802.11ax_HE40 Band 3_Straddle channel_SU

Ant.1

Ant.2



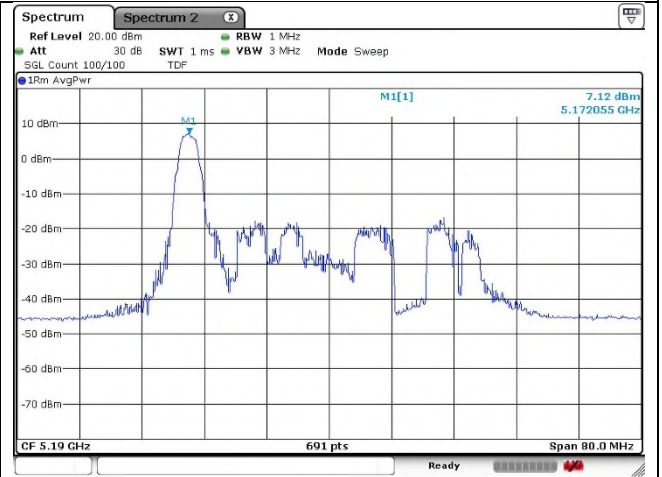
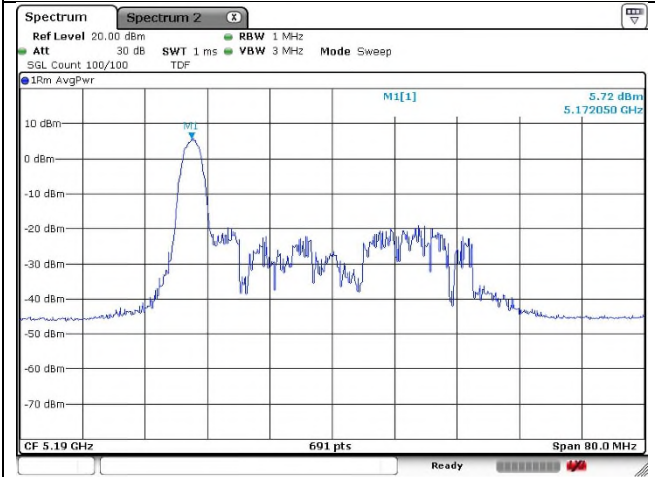
- MIMO

802.11ax_HE40 Band 1_Low channel_26T

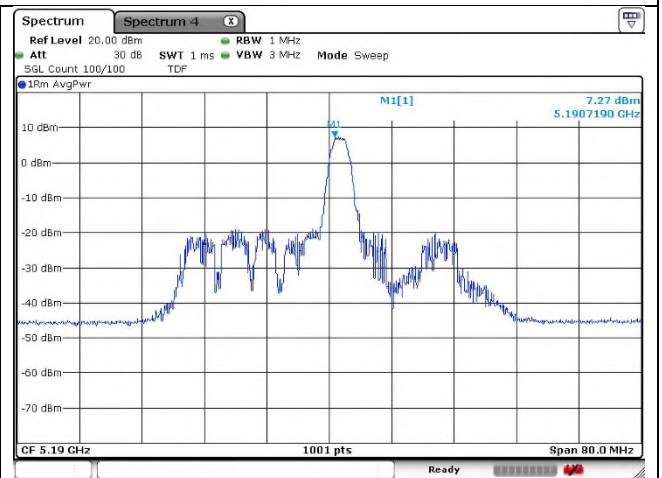
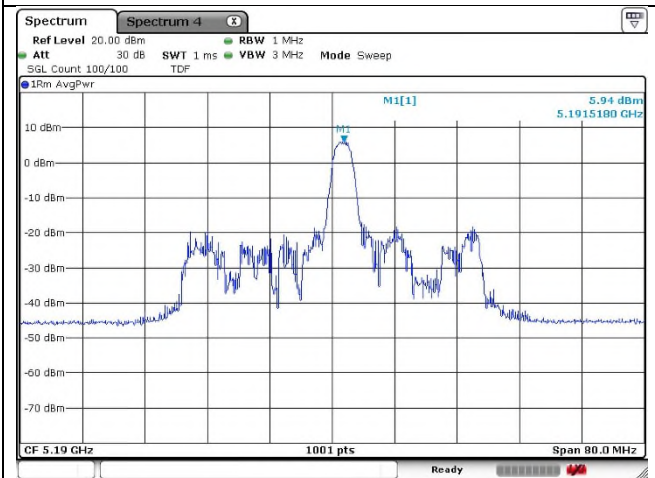
Ant.1

Ant.2

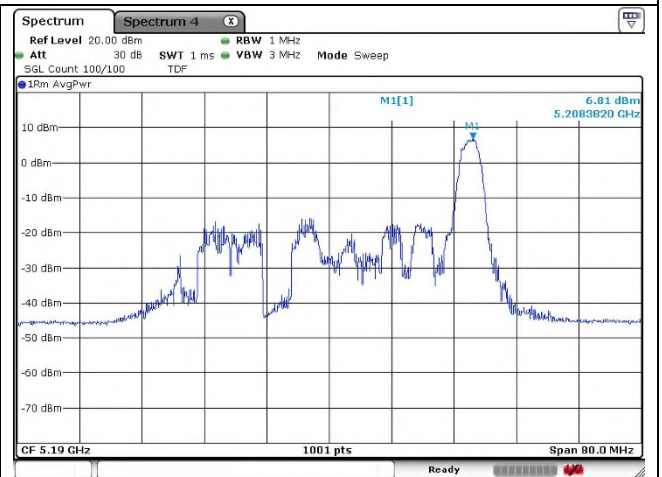
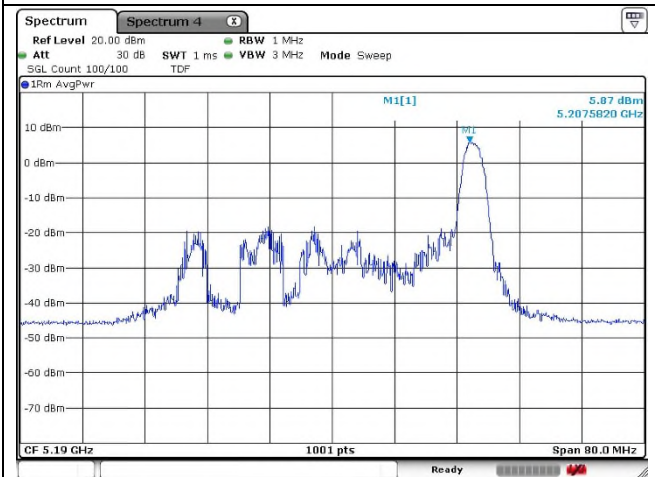
0 RU



9 RU



17 RU

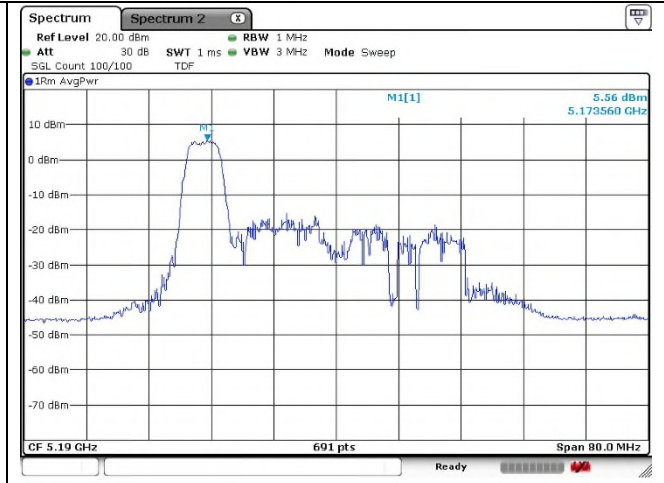
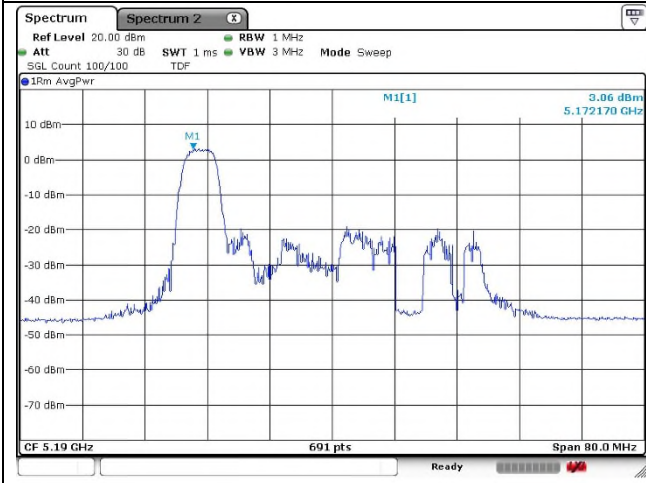


802.11ax_HE40 Band 1_Low channel_52T

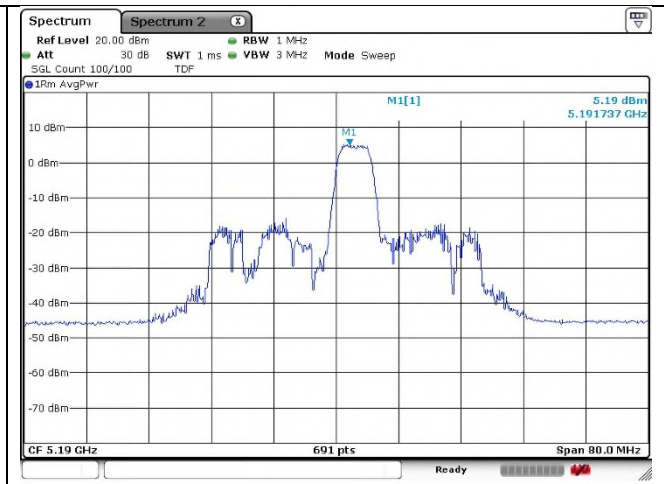
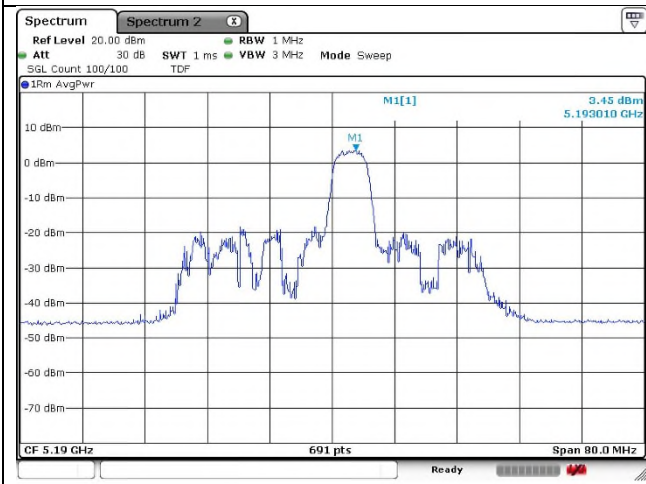
Ant.1

Ant.2

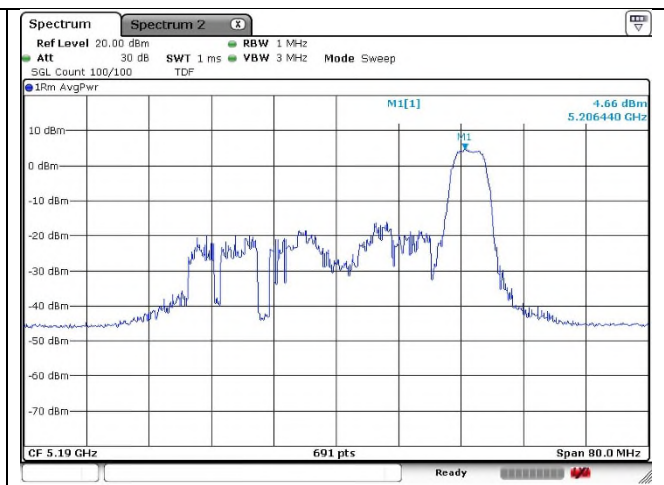
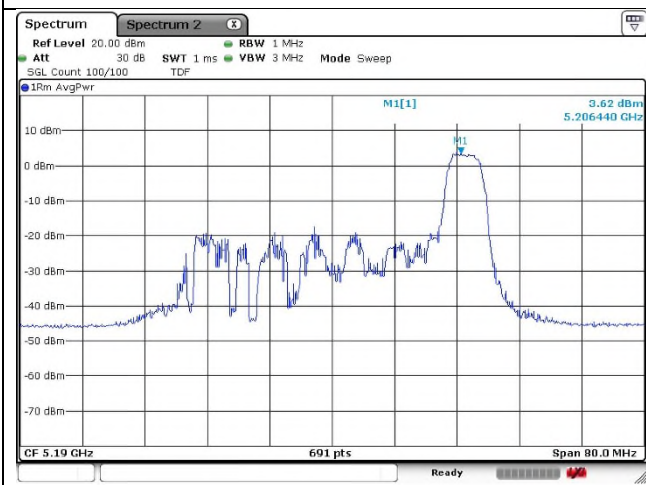
37 RU



41 RU



44 RU

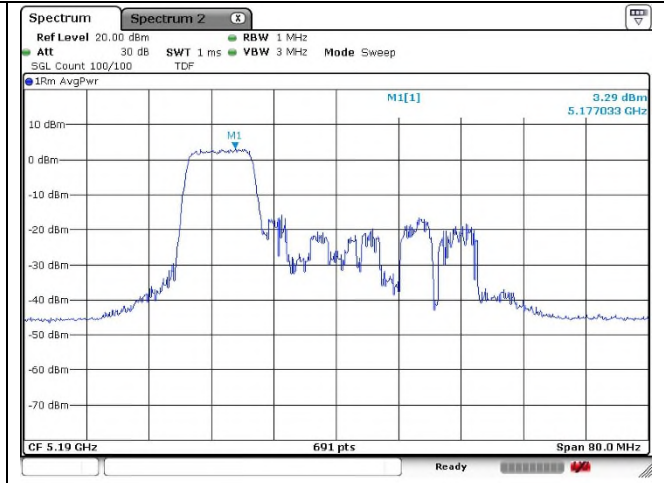
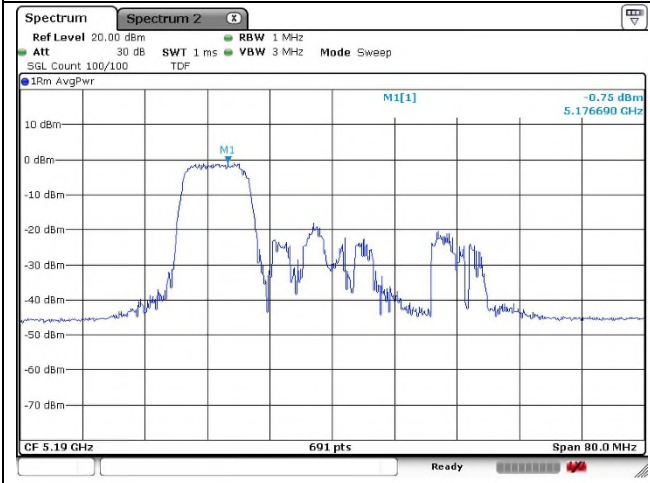


802.11ax_HE40 Band 1_Low channel_106T

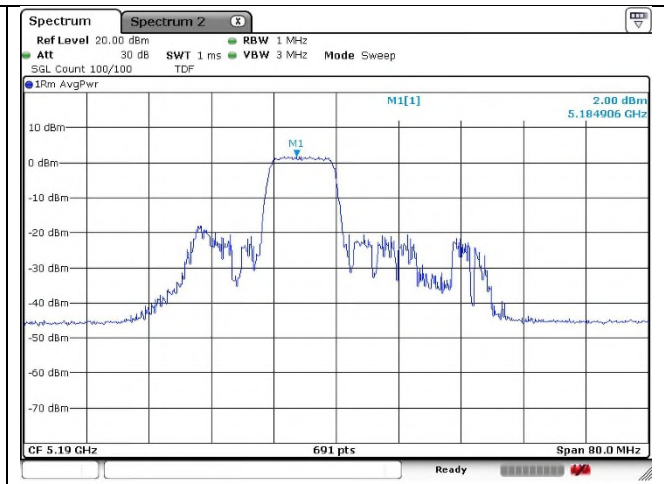
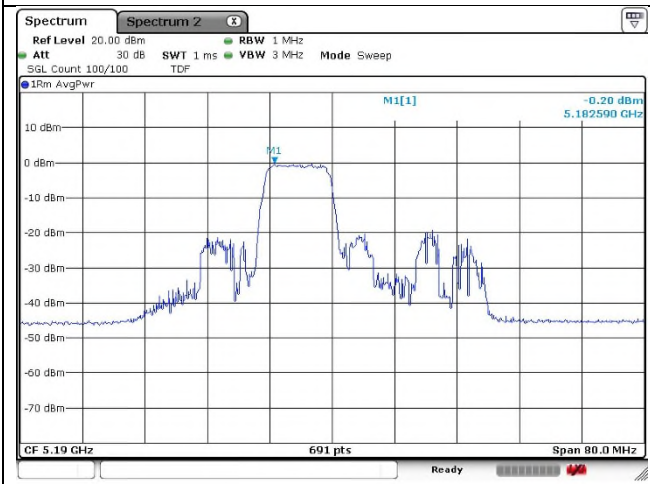
Ant.1

Ant.2

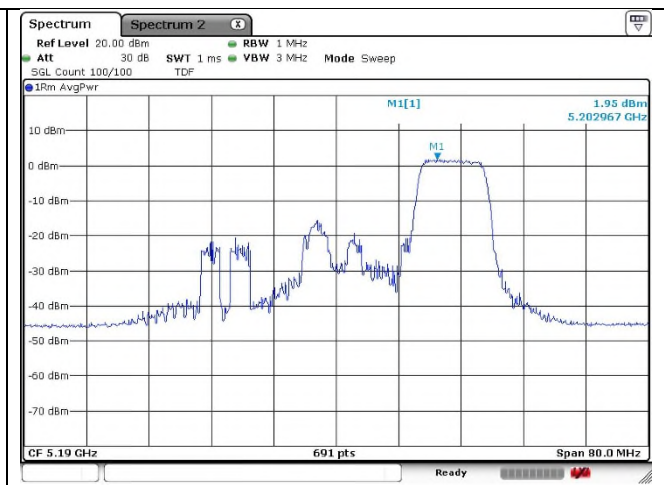
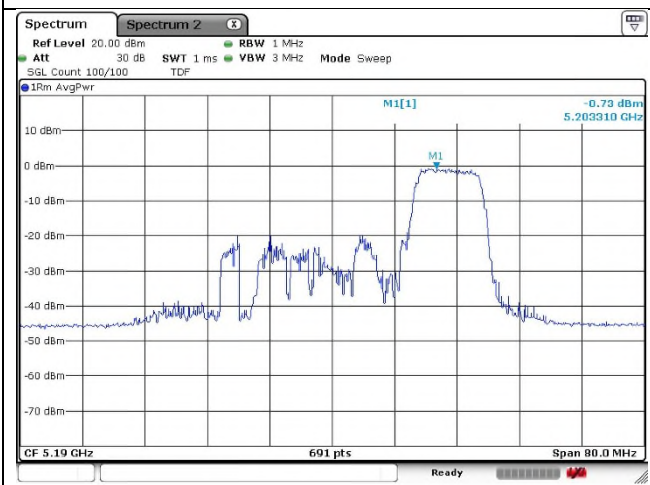
53 RU



54 RU



56 RU

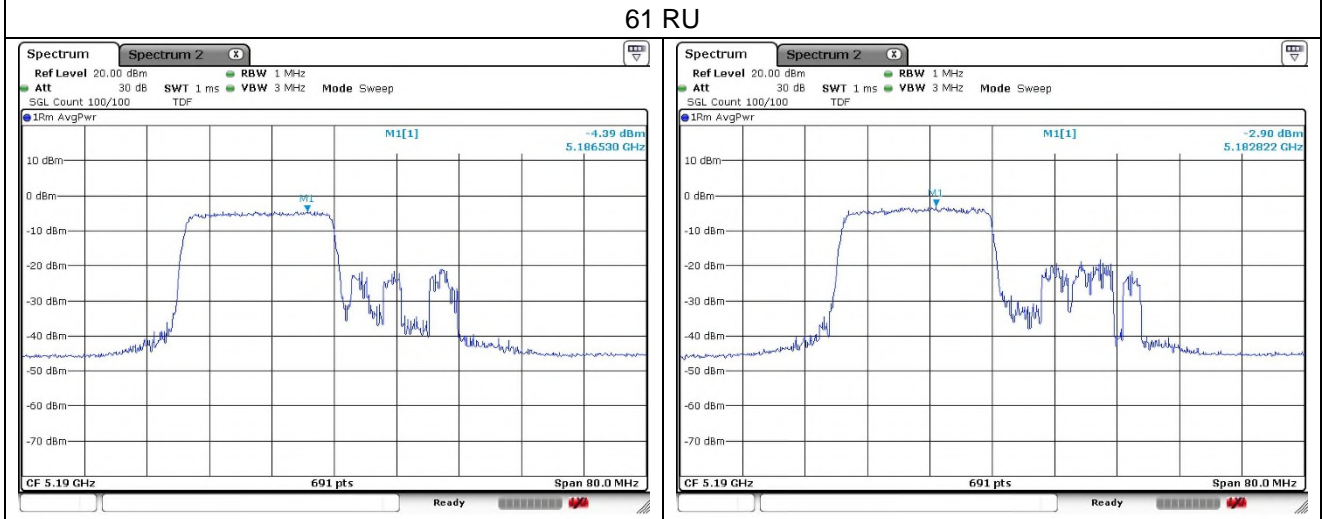


802.11ax_HE40 Band 1_Low channel_242T

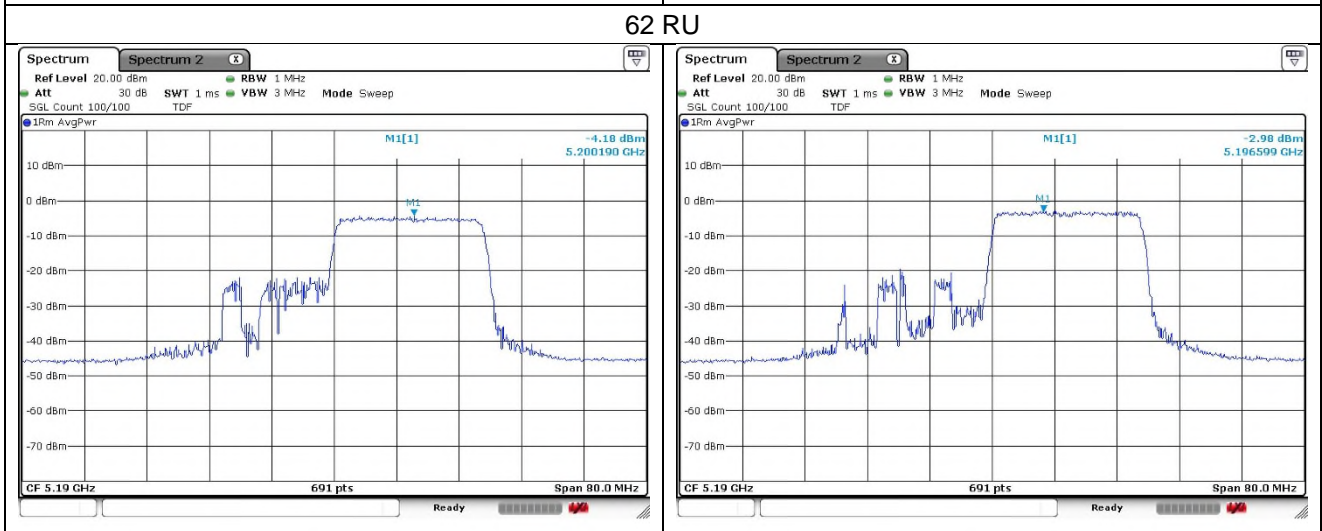
Ant.1

Ant.2

61 RU



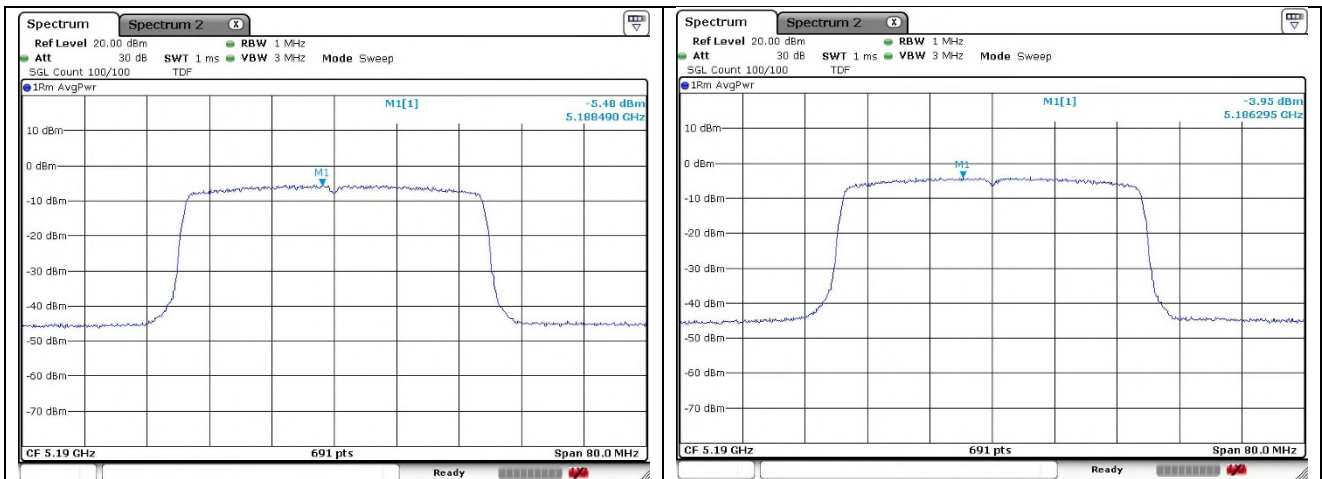
62 RU



802.11ax_HE40 Band 1_Low channel_SU

Ant.1

Ant.2

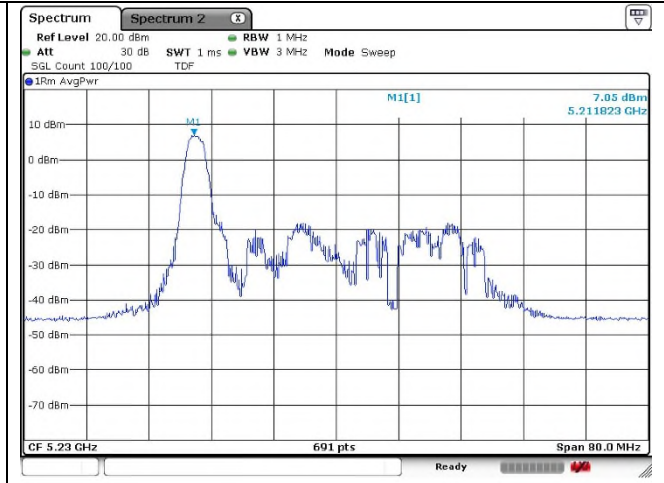
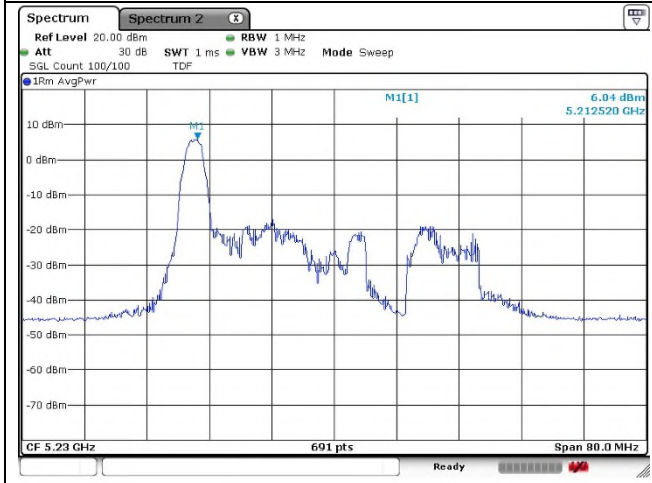


802.11ax_HE40 Band 1_High channel_26T

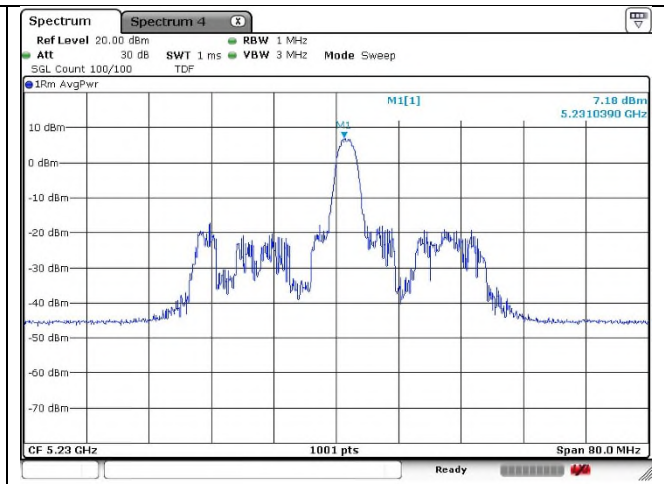
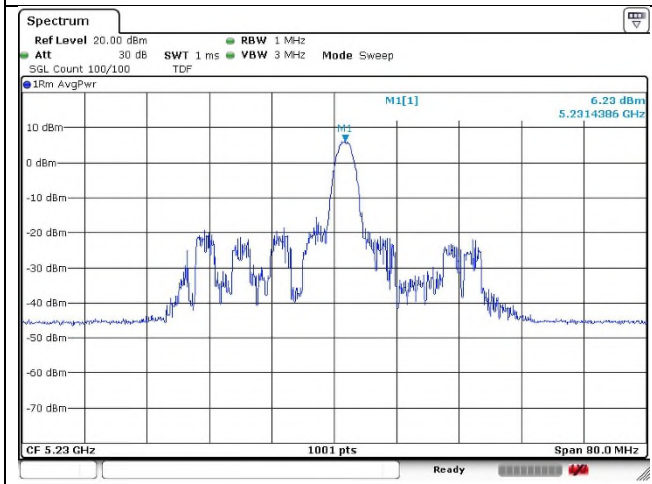
Ant.1

Ant.2

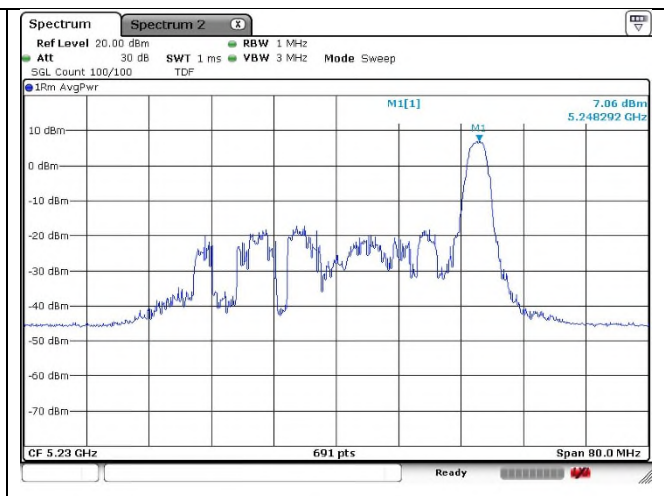
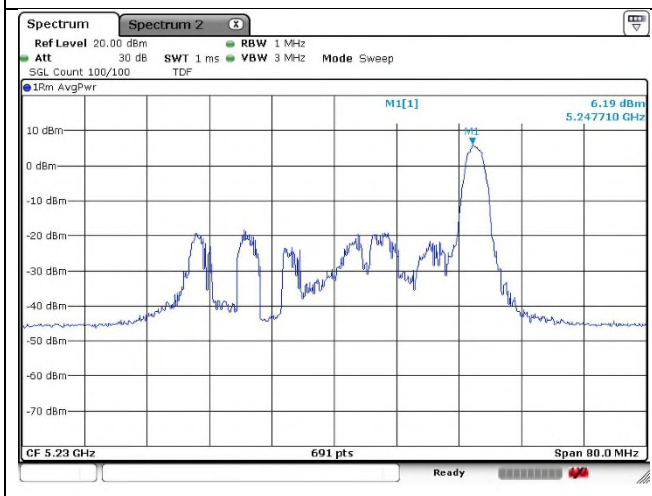
0 RU



9 RU



17 RU

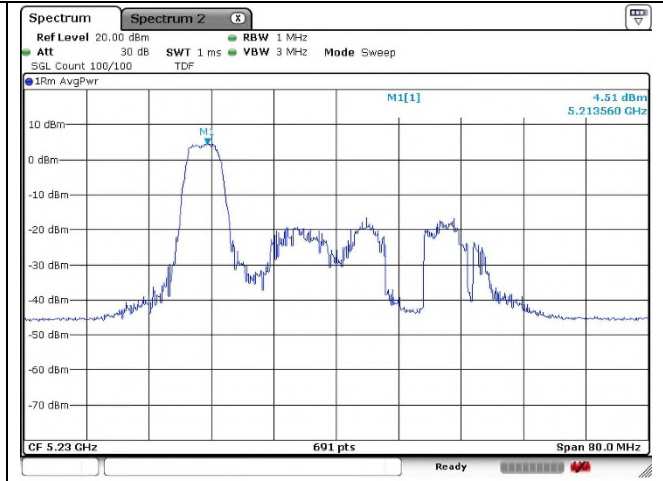
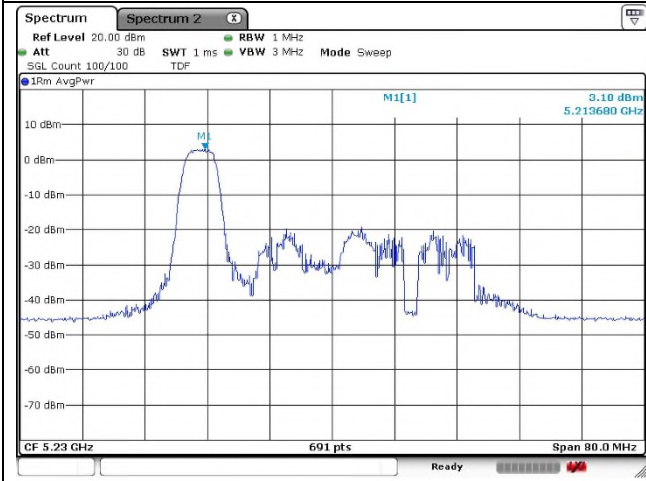


802.11ax_HE40 Band 1_High channel_52T

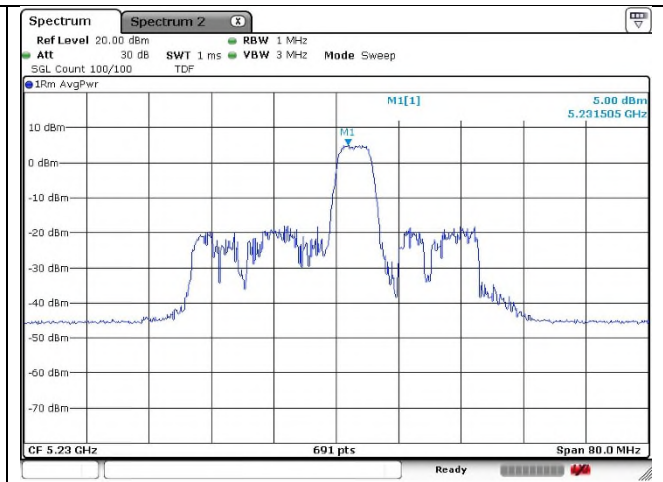
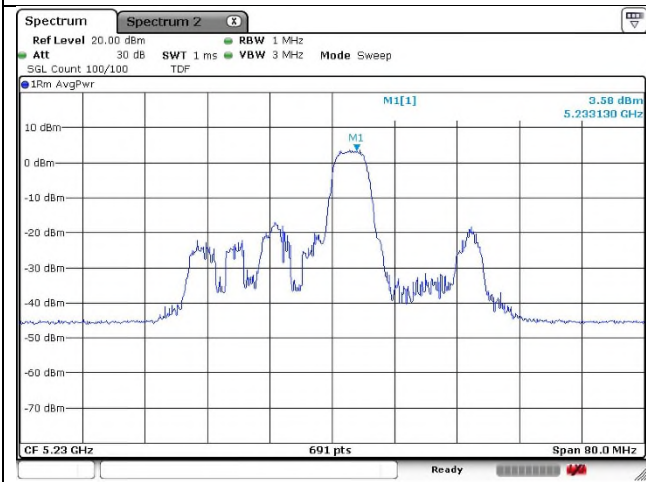
Ant.1

Ant.2

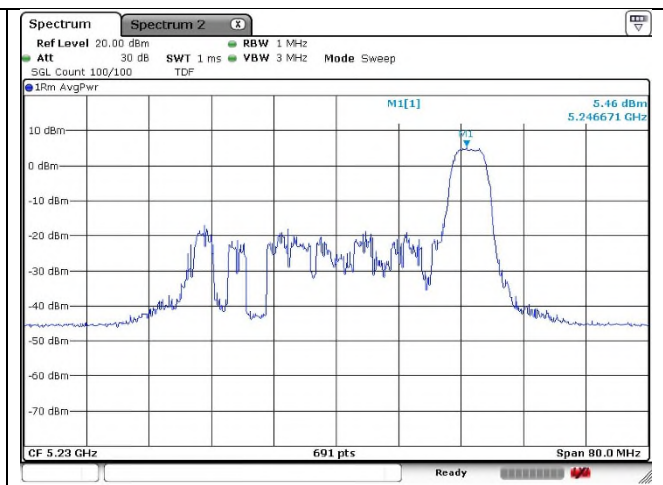
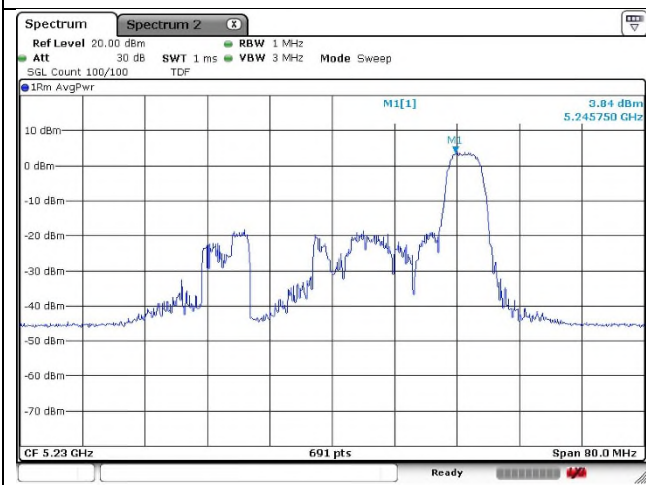
37 RU



41 RU



44 RU

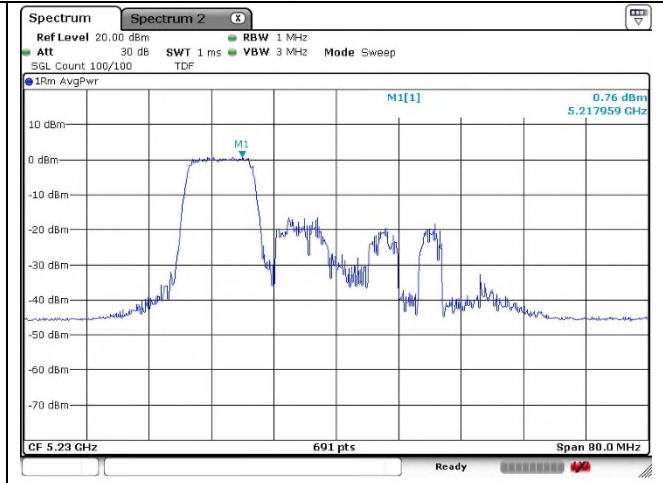
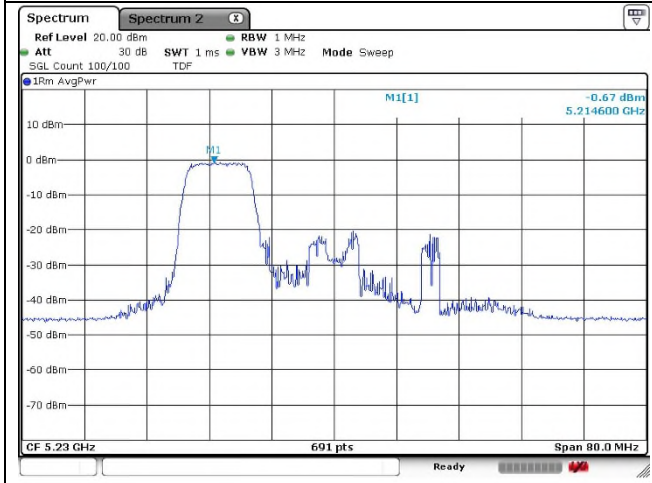


802.11ax_HE40 Band 1_High channel_106T

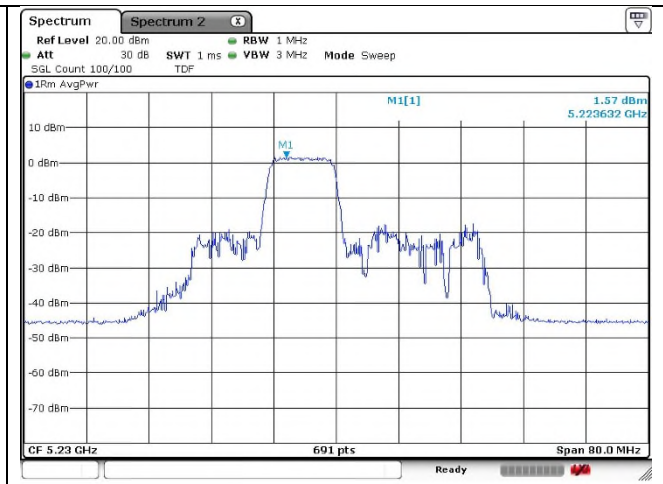
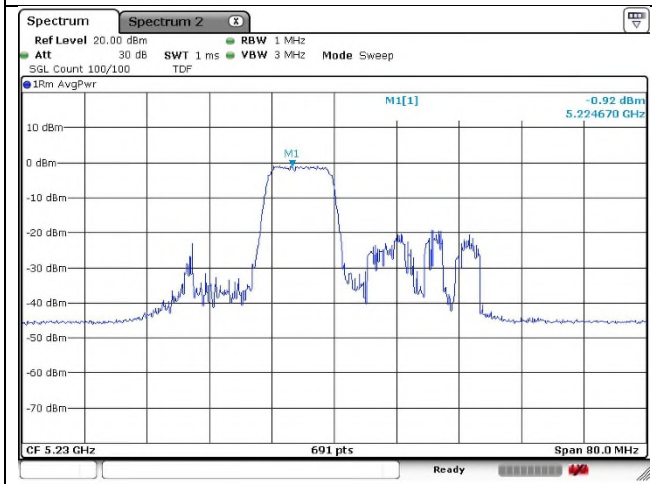
Ant.1

Ant.2

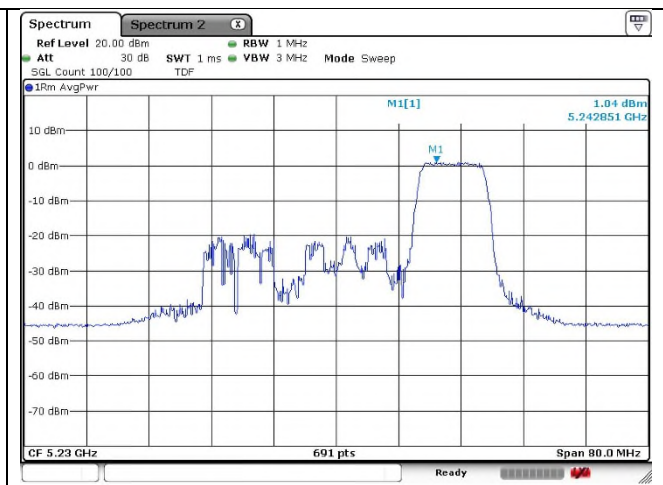
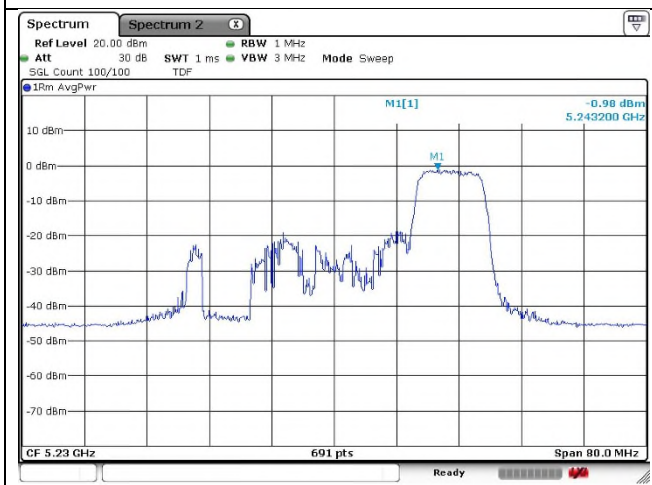
53 RU



54 RU



56 RU

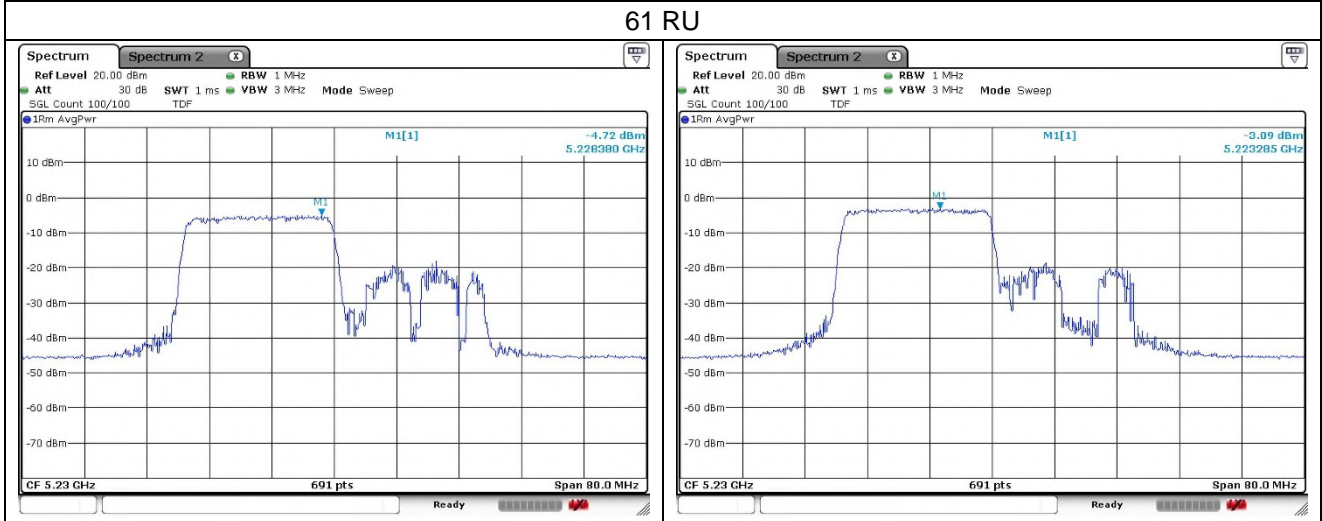


802.11ax_HE40 Band 1_High channel_242T

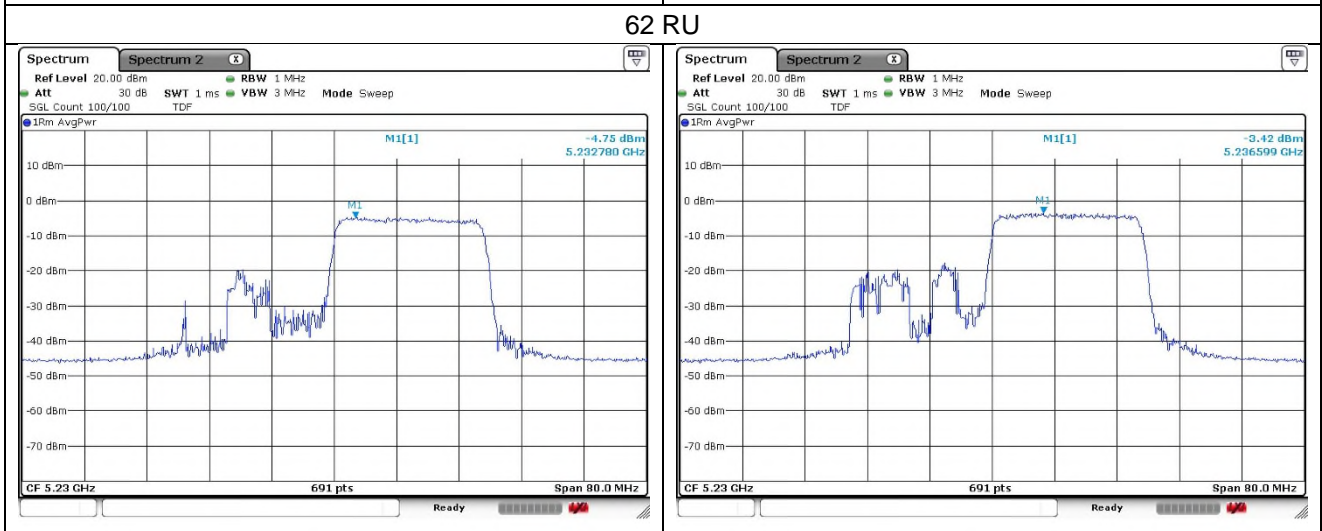
Ant.1

Ant.2

61 RU



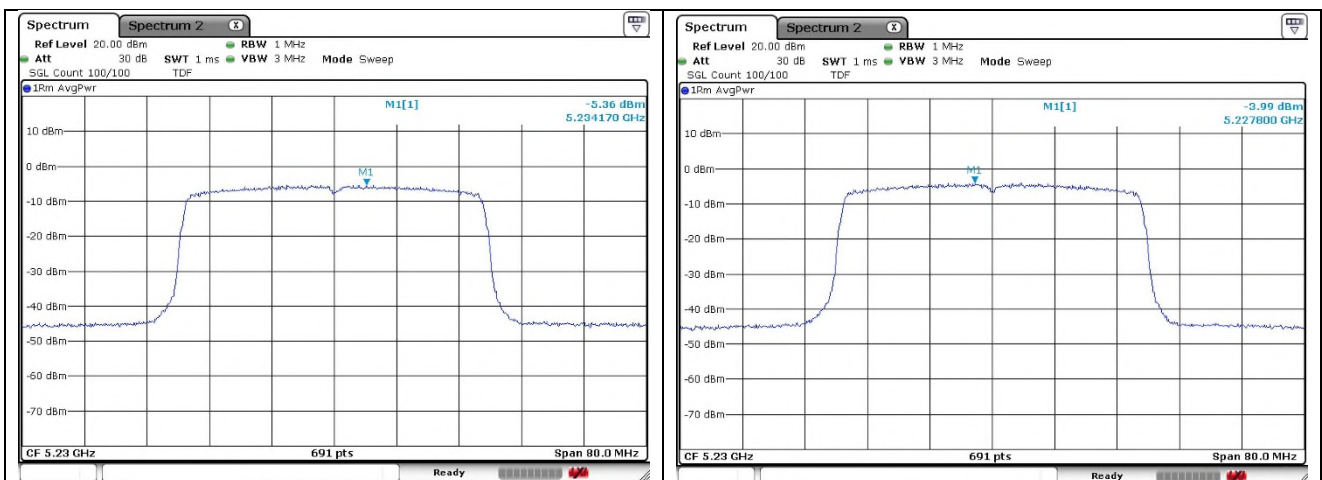
62 RU



802.11ax_HE40 Band 1_High channel_SU

Ant.1

Ant.2

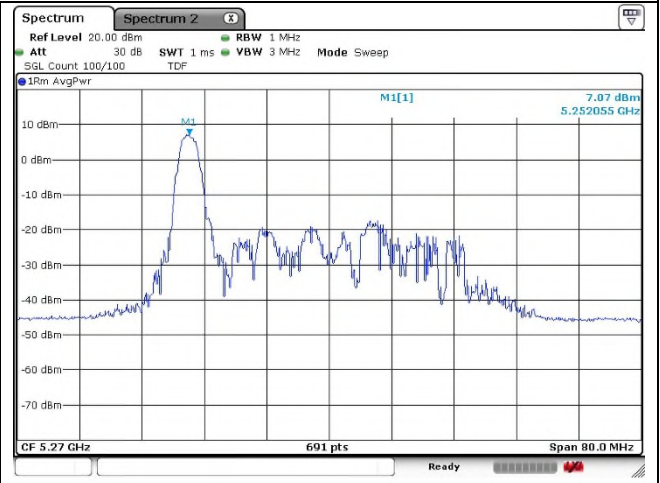
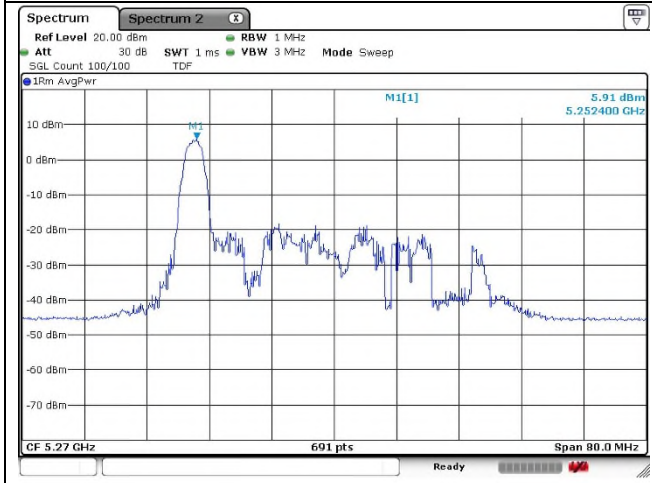


802.11ax_HE40 Band 2A_Low channel_26T

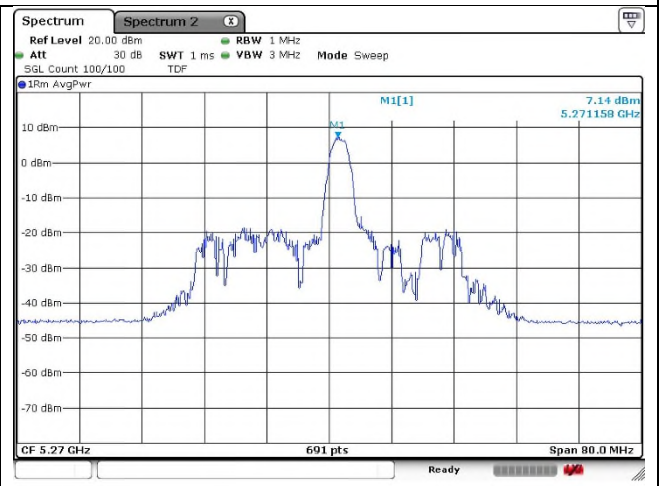
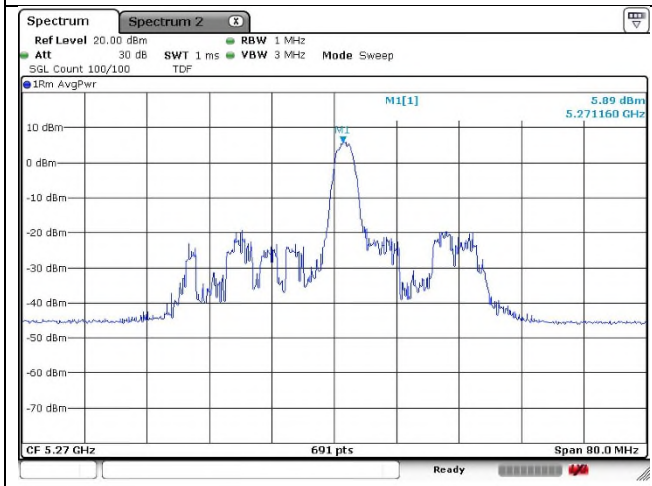
Ant.1

Ant.2

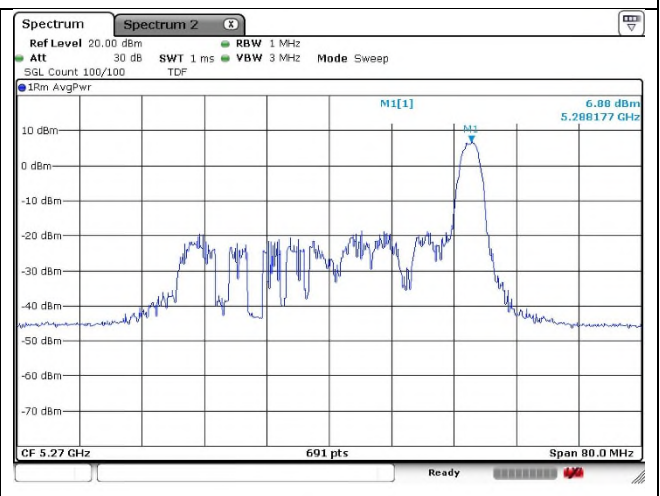
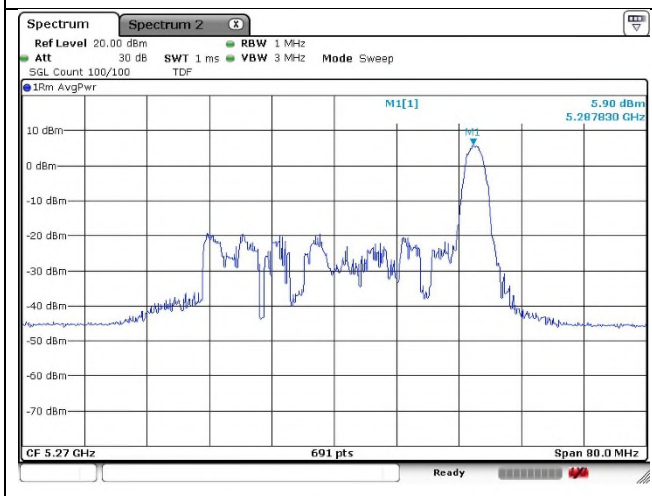
0 RU



9 RU



17 RU

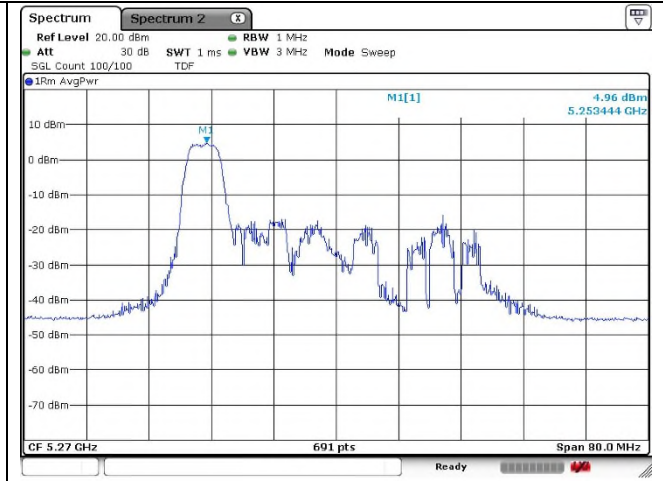
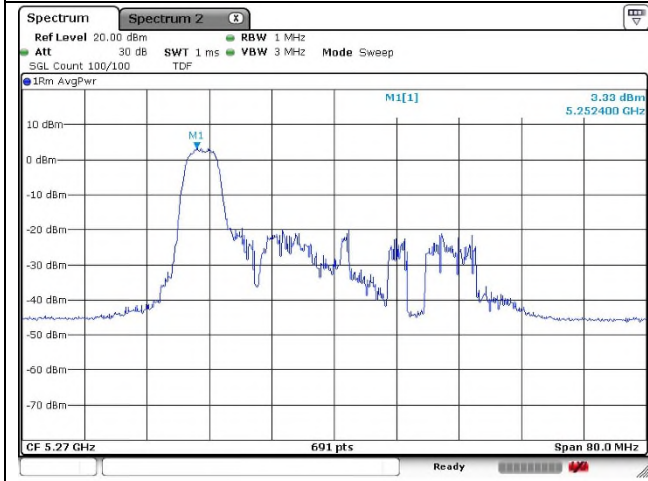


802.11ax_HE40 Band 2A_Low channel_52T

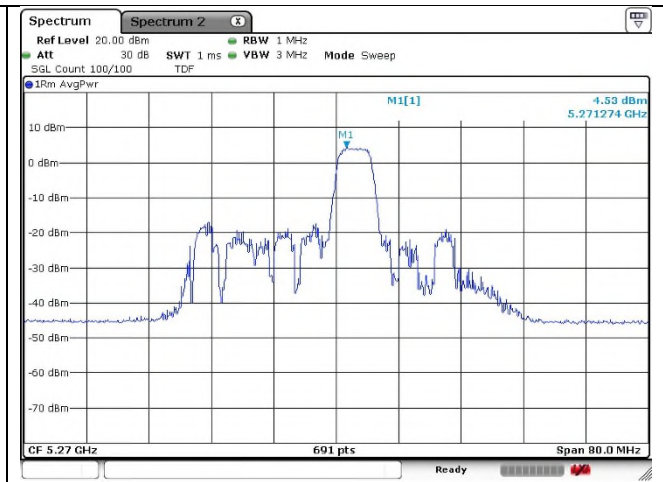
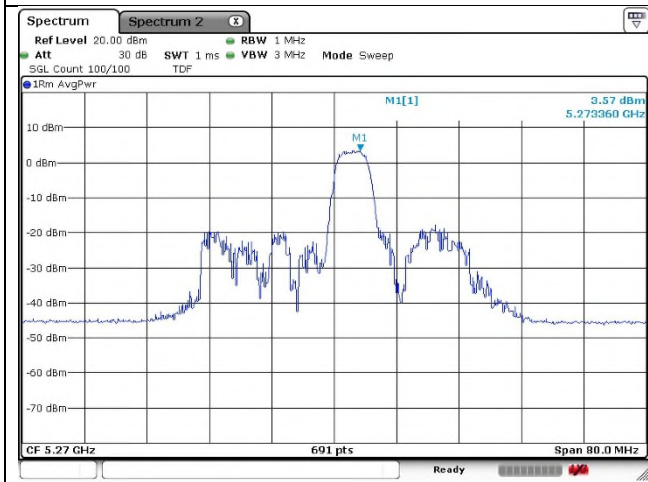
Ant.1

Ant.2

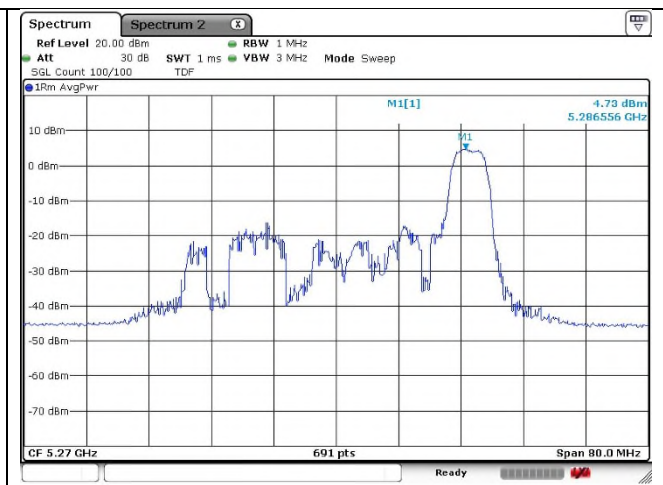
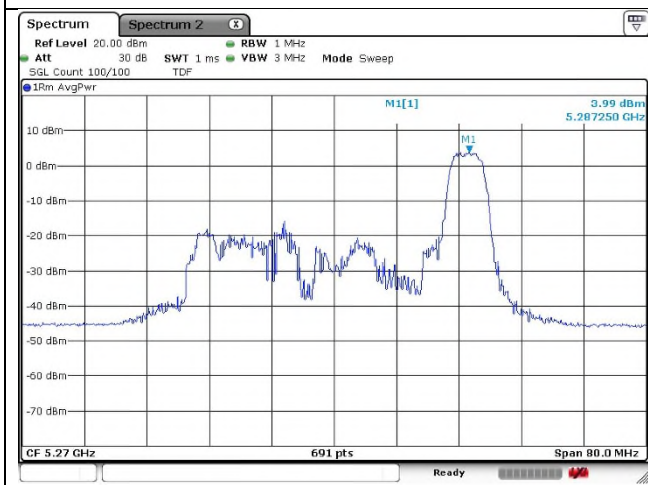
37 RU



41 RU



44 RU

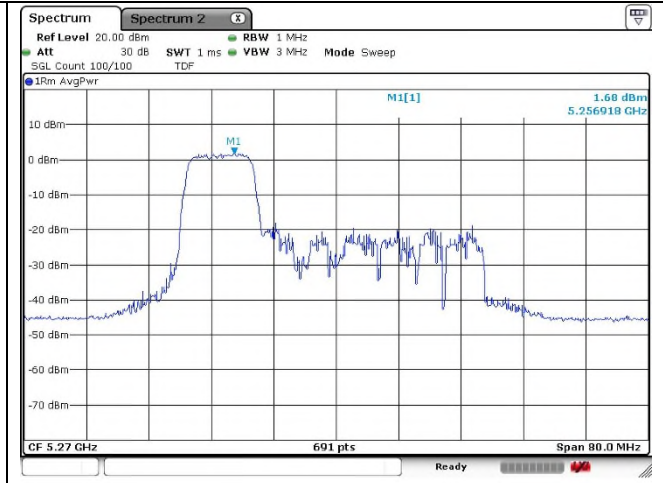
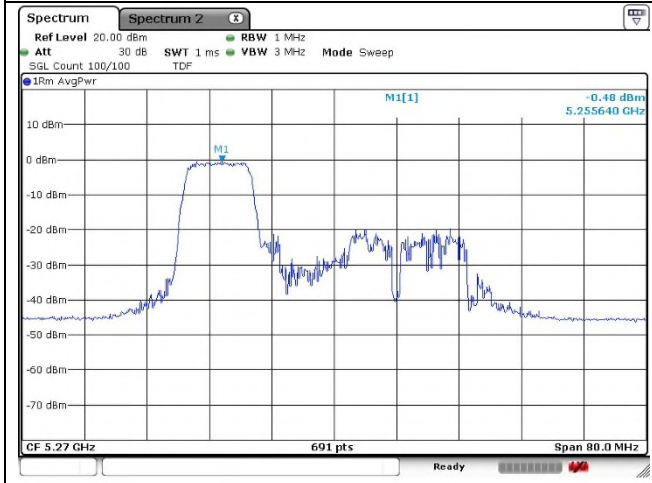


802.11ax_HE40 Band 2A_Low channel_106T

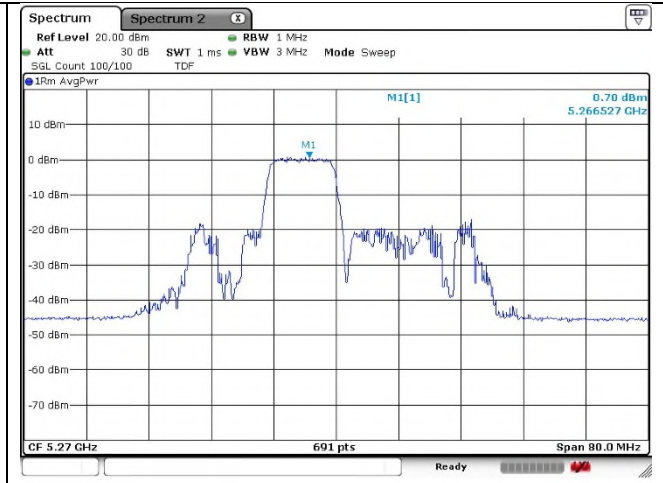
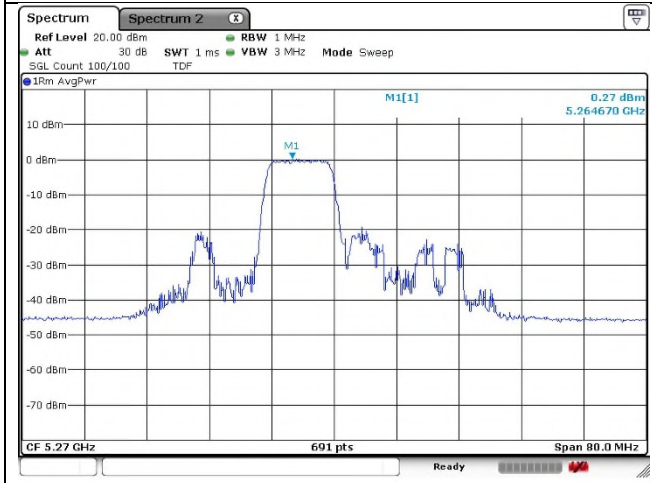
Ant.1

Ant.2

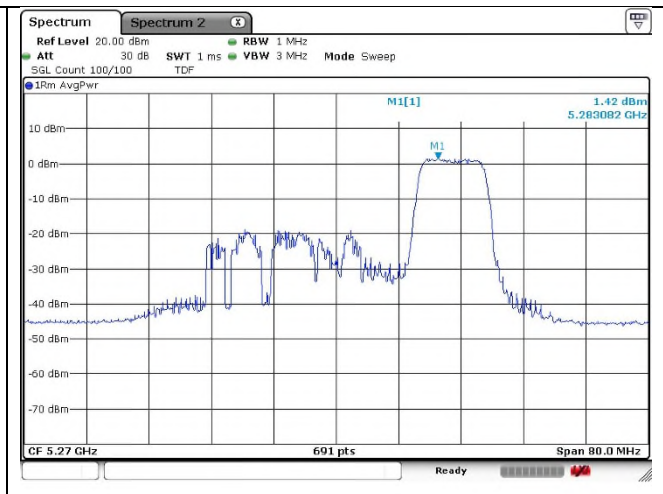
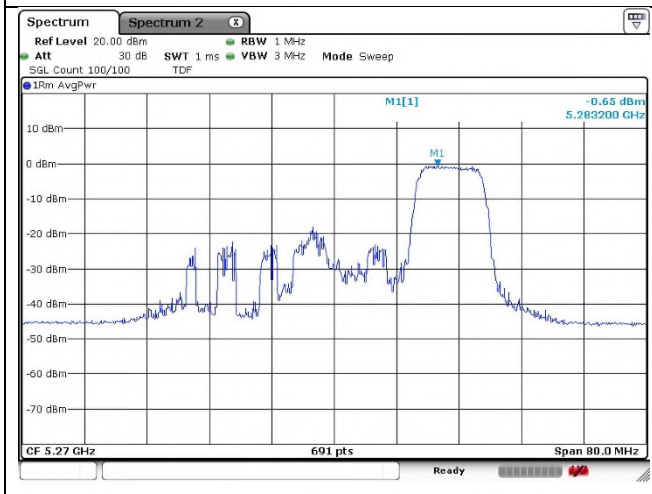
53 RU



54 RU



56 RU

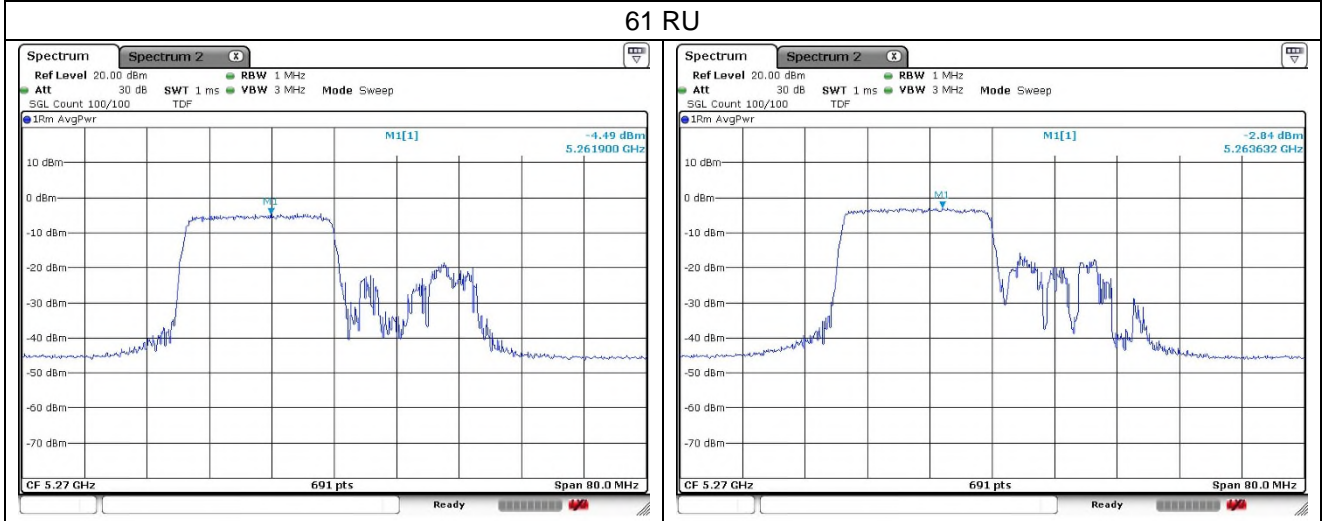


802.11ax_HE40 Band 2A_Low channel_242T

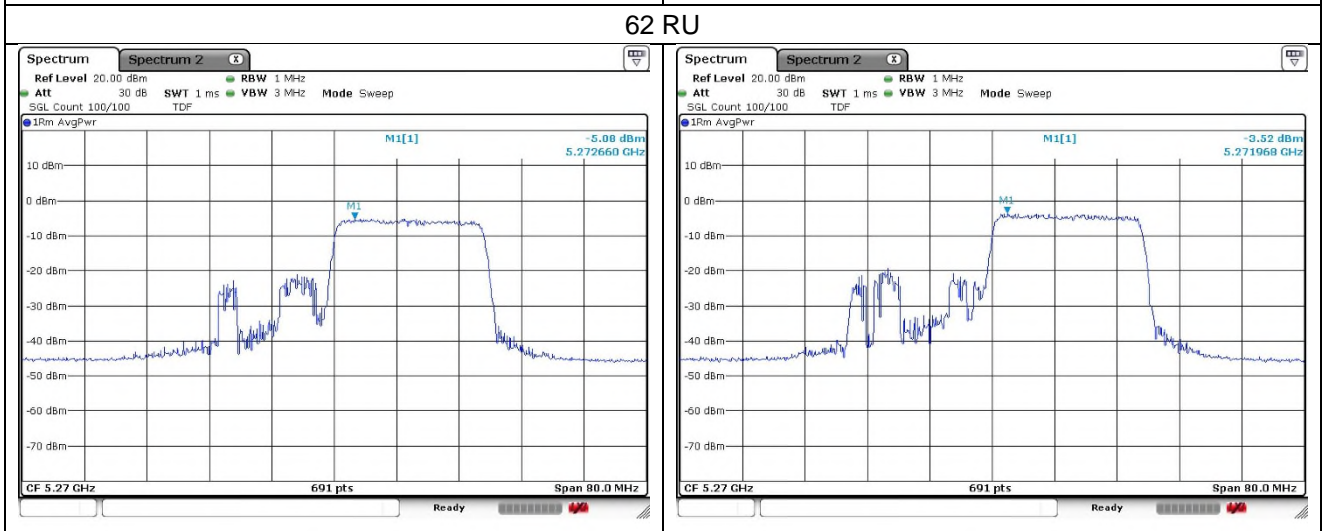
Ant.1

Ant.2

61 RU



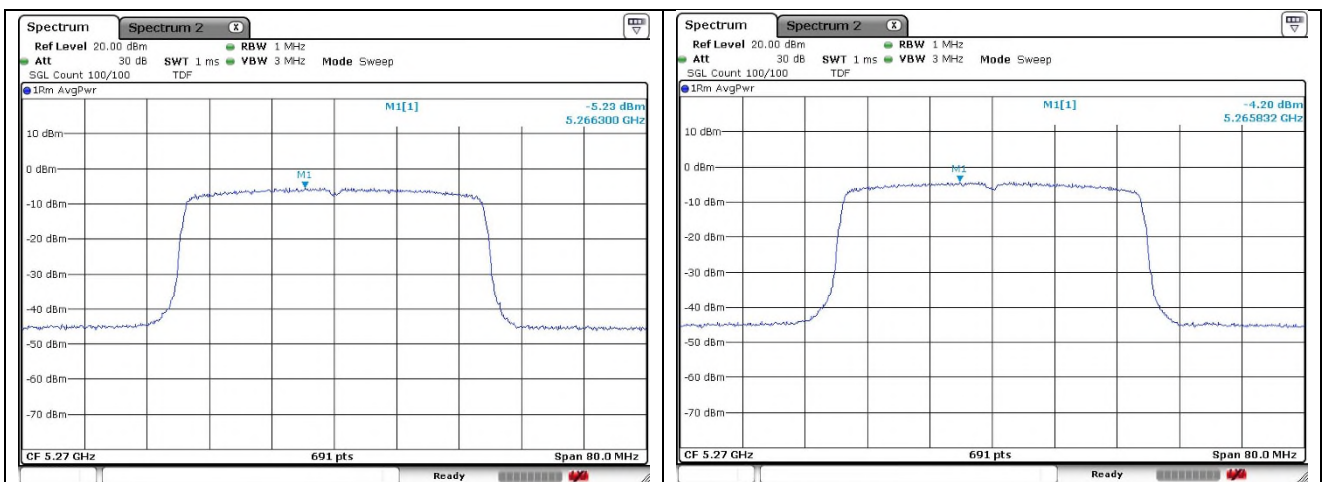
62 RU



802.11ax_HE40 Band 2A_Low channel_SU

Ant.1

Ant.2

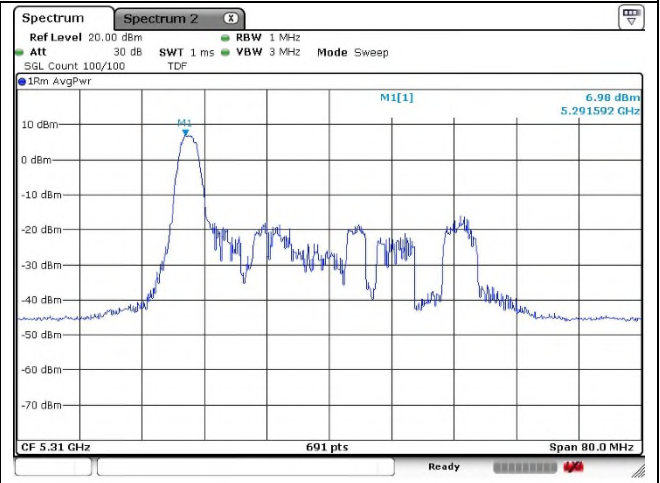
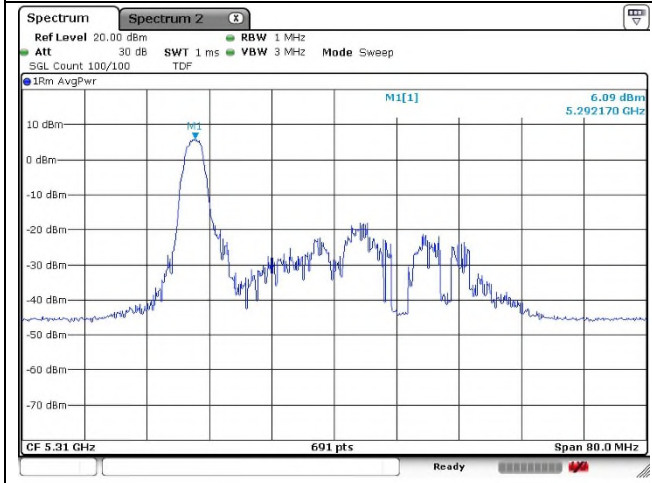


802.11ax_HE40 Band 2A_High channel_26T

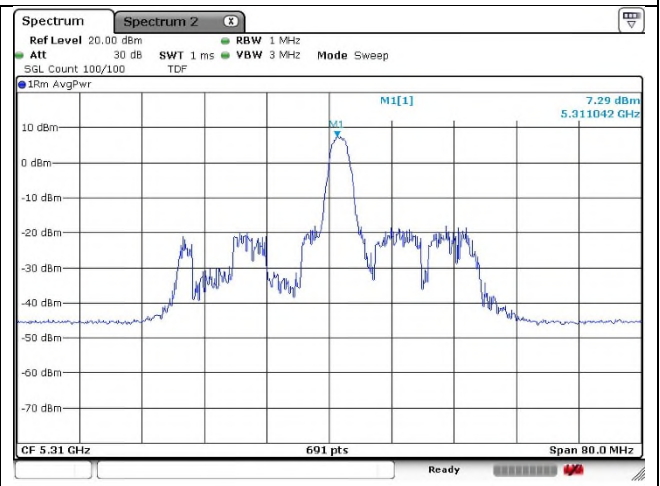
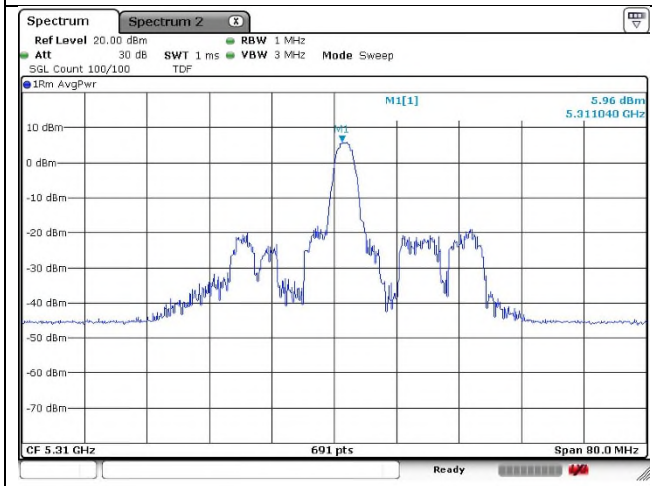
Ant.1

Ant.2

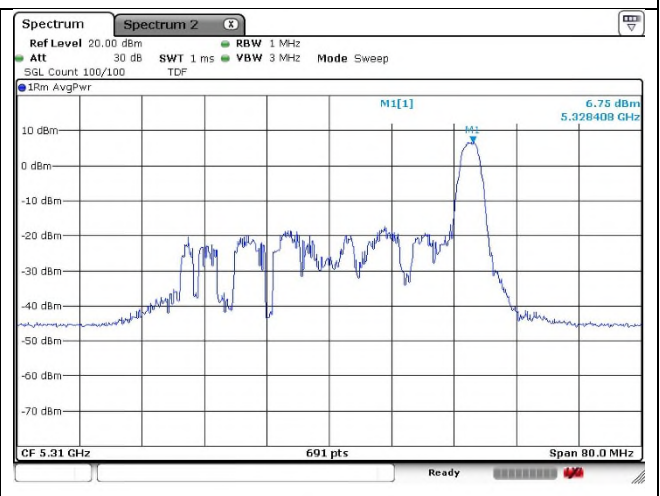
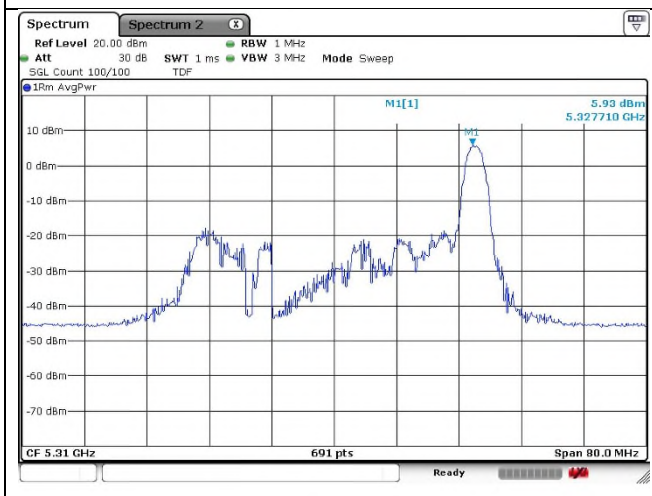
0 RU



9 RU



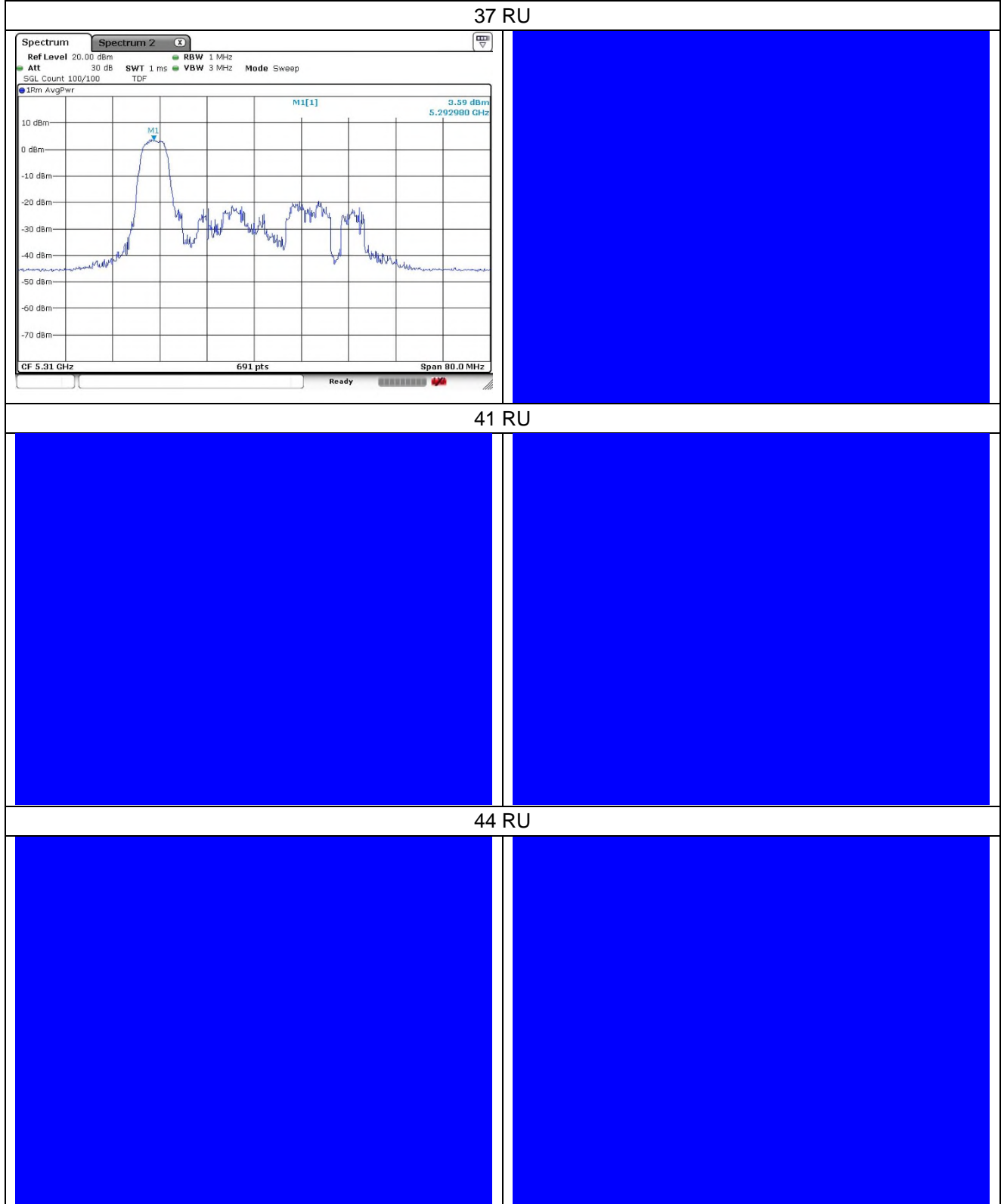
17 RU



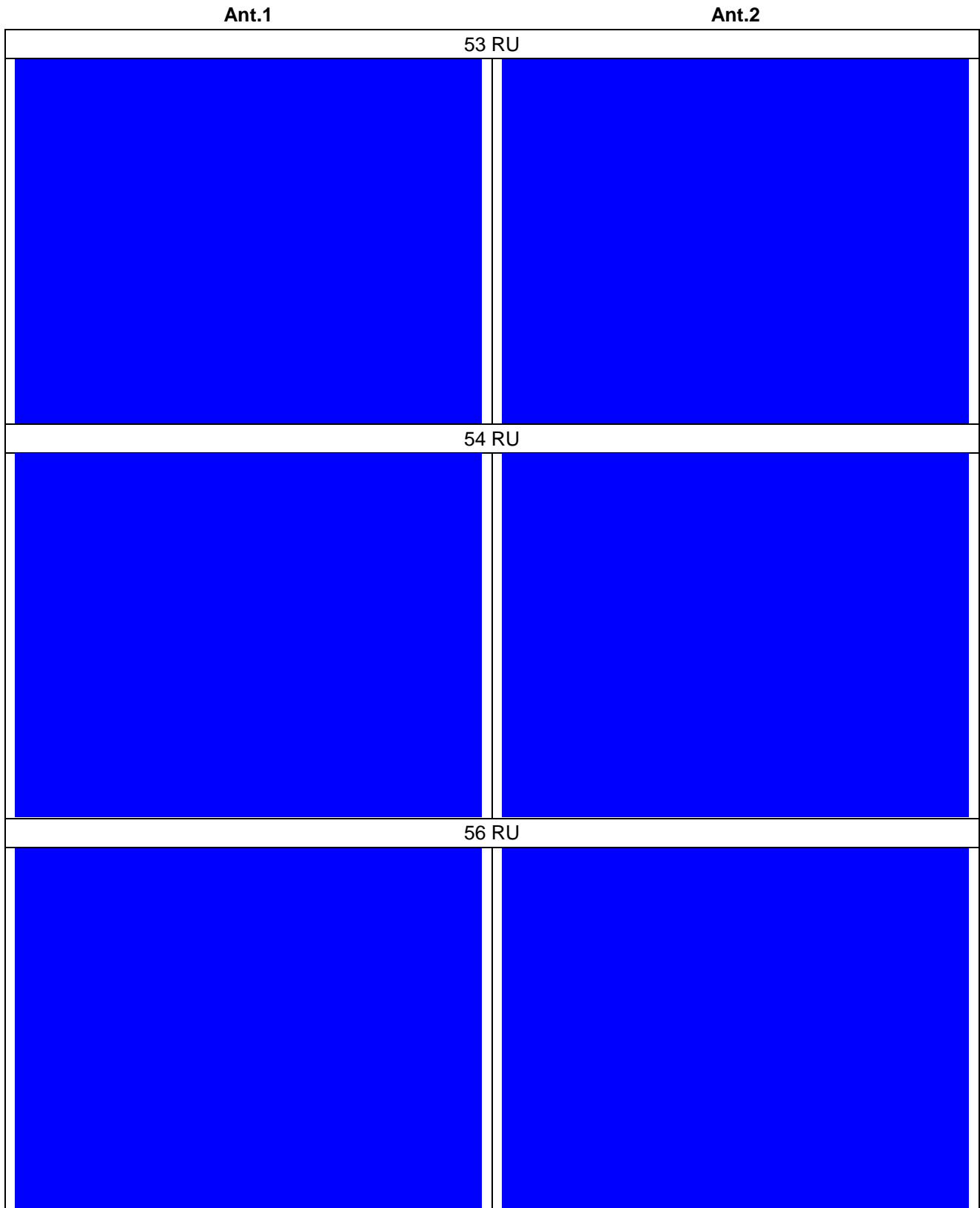
802.11ax_HE40 Band 2A_High channel_52T

Ant.1

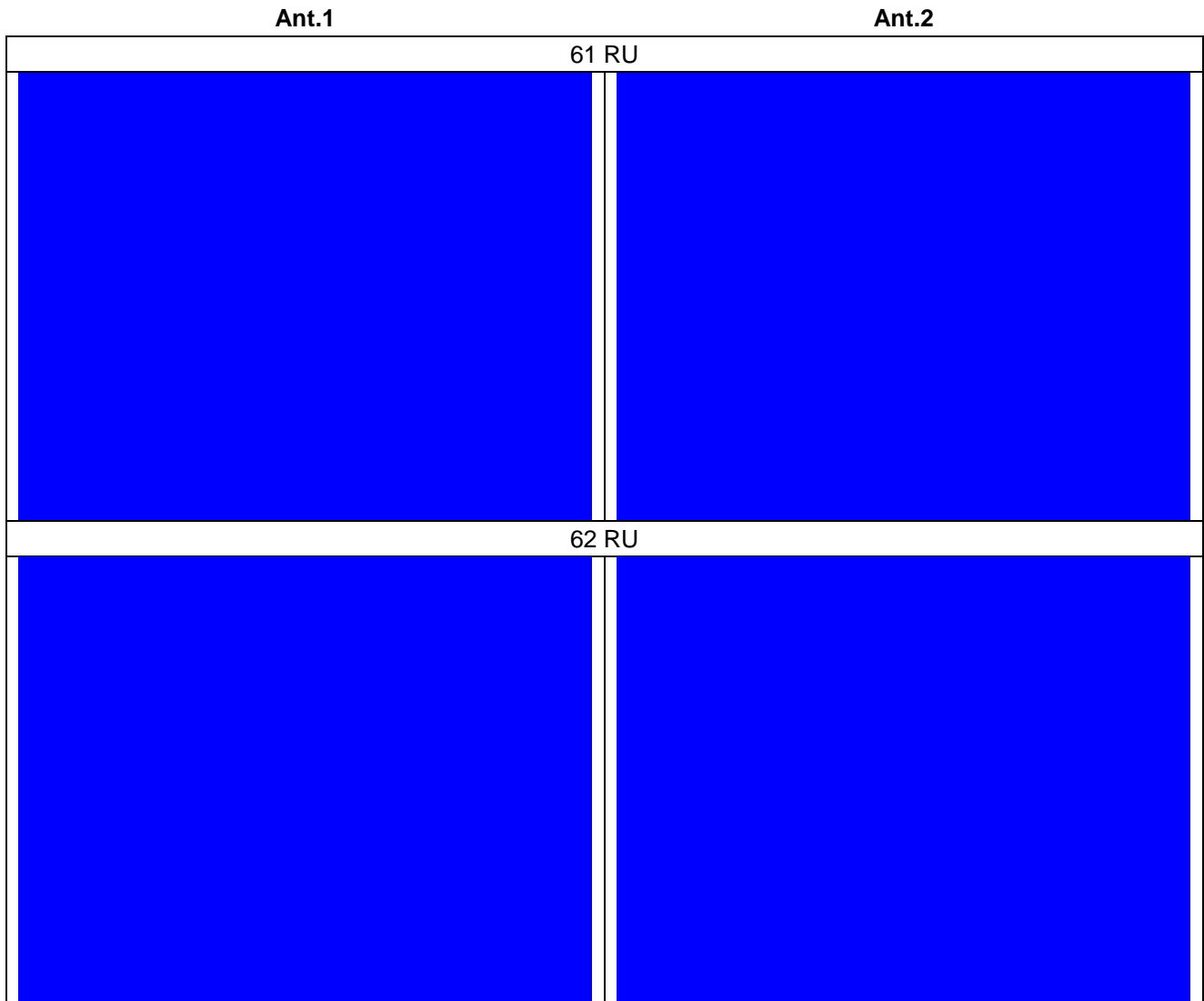
Ant.2



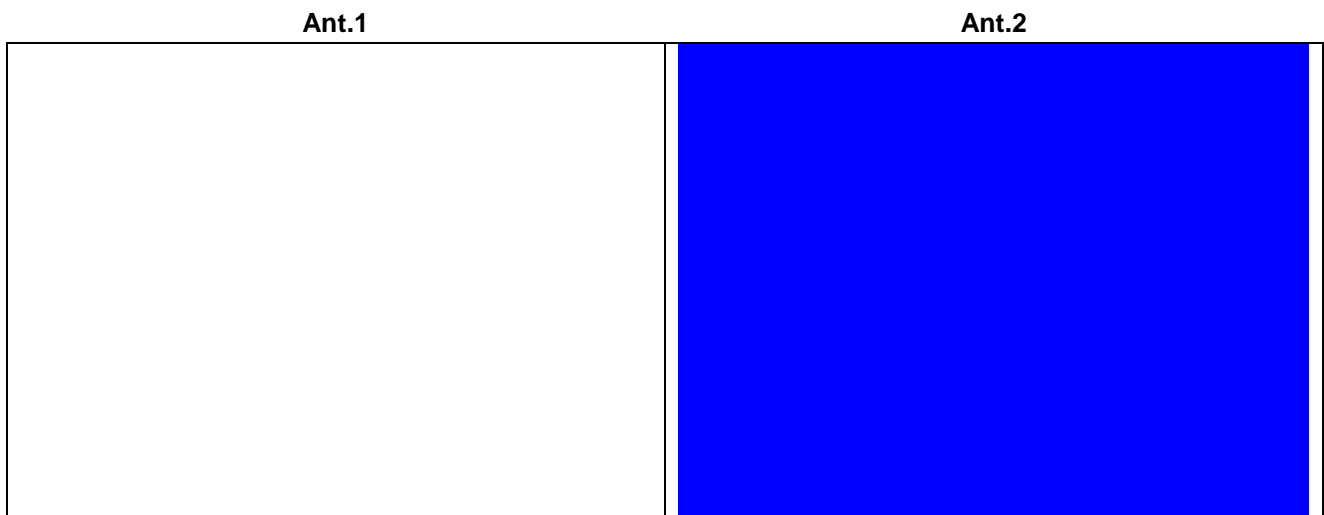
802.11ax_HE40 Band 2A_High channel_106T



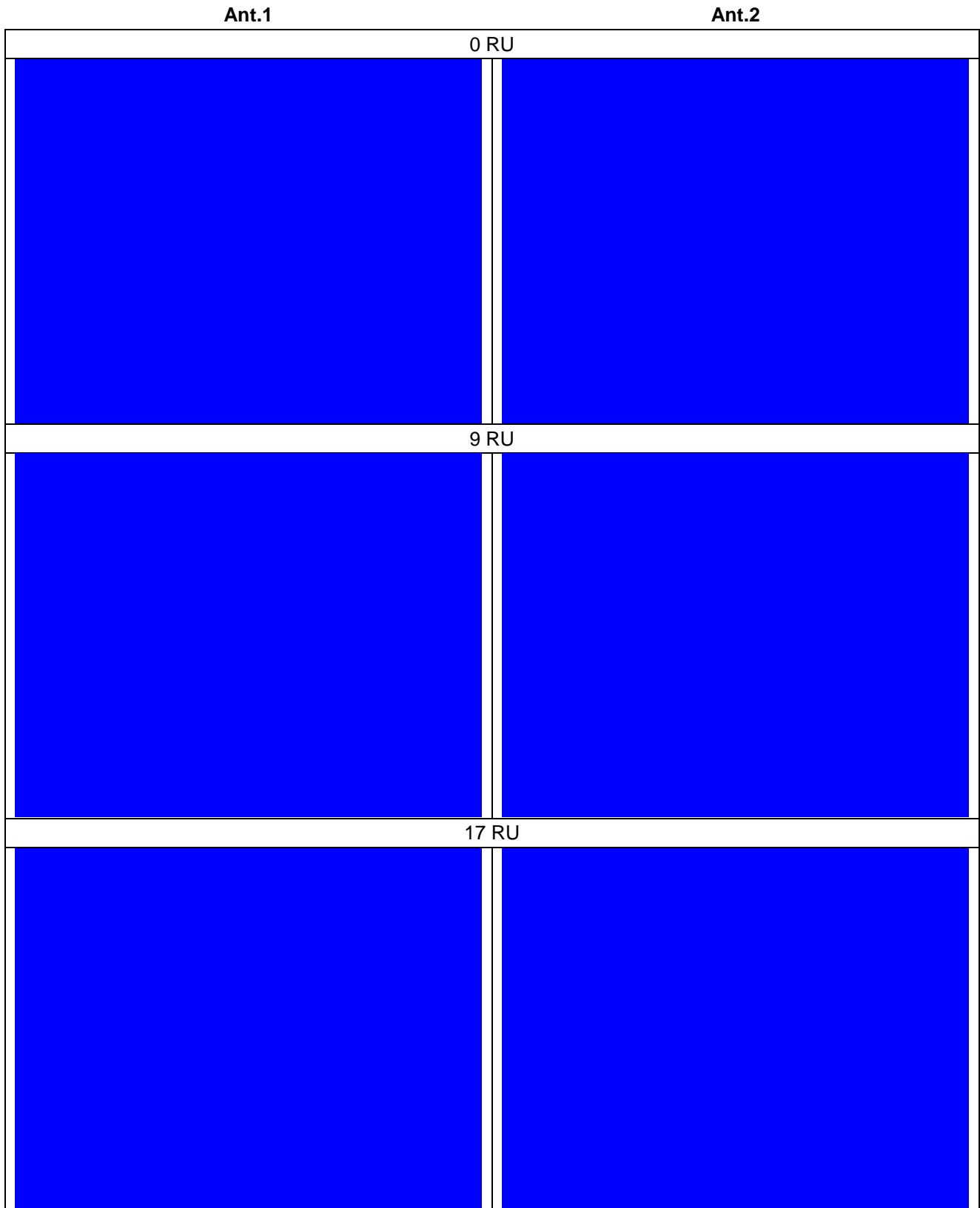
802.11ax_HE40 Band 2A_High channel_242T



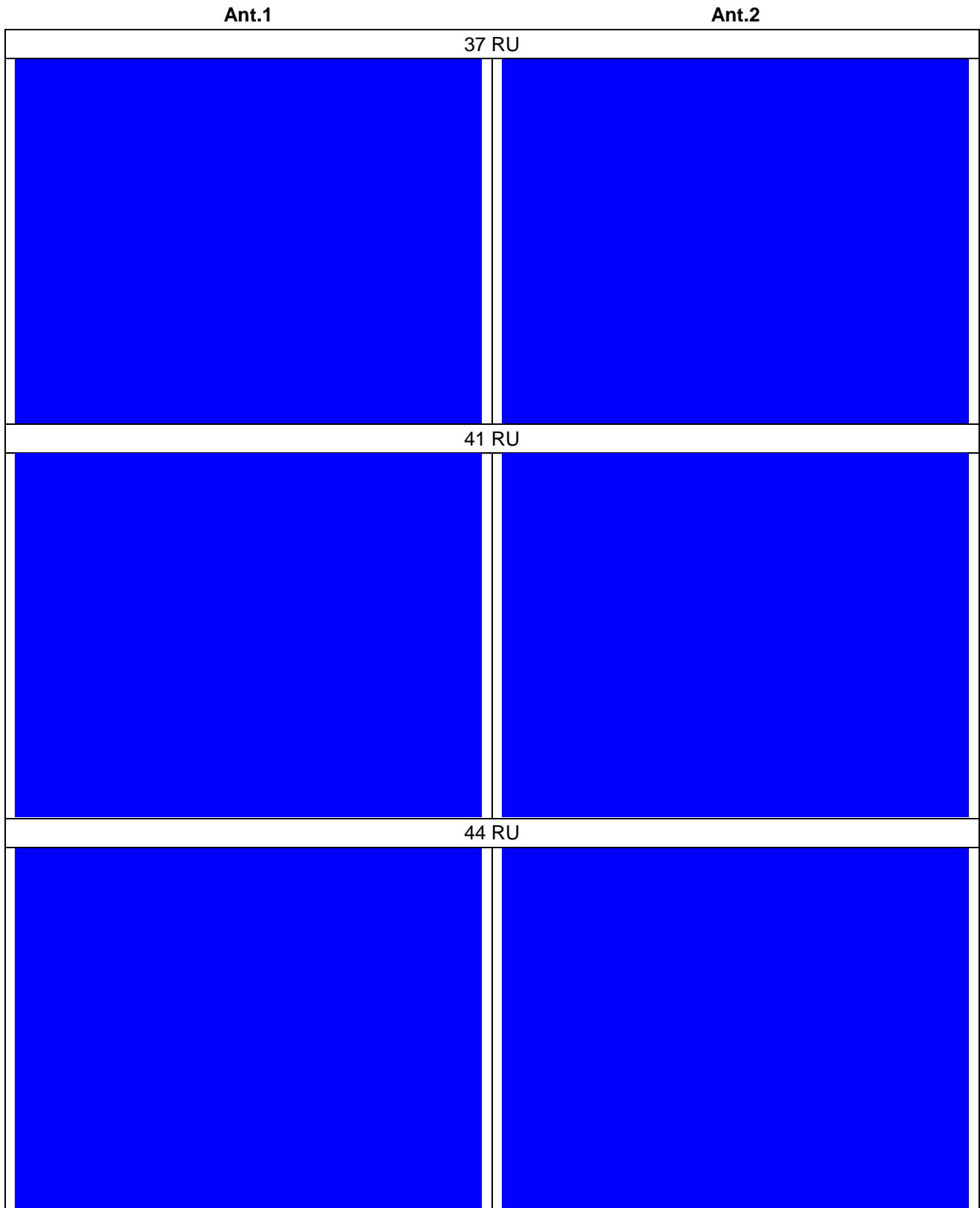
802.11ax_HE40 Band 2A_High channel_SU



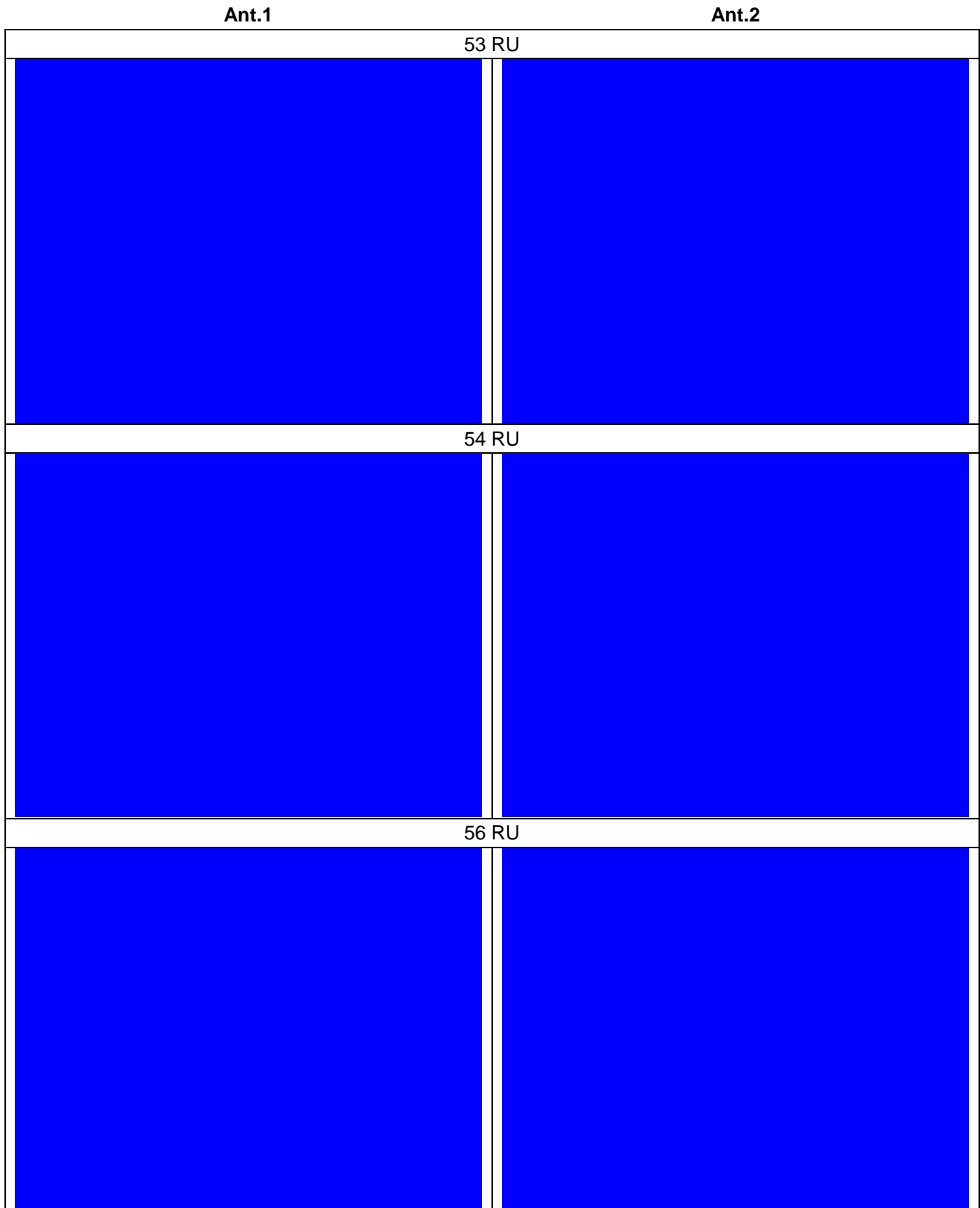
802.11ax_HE40 Band 2C_Low channel_26T



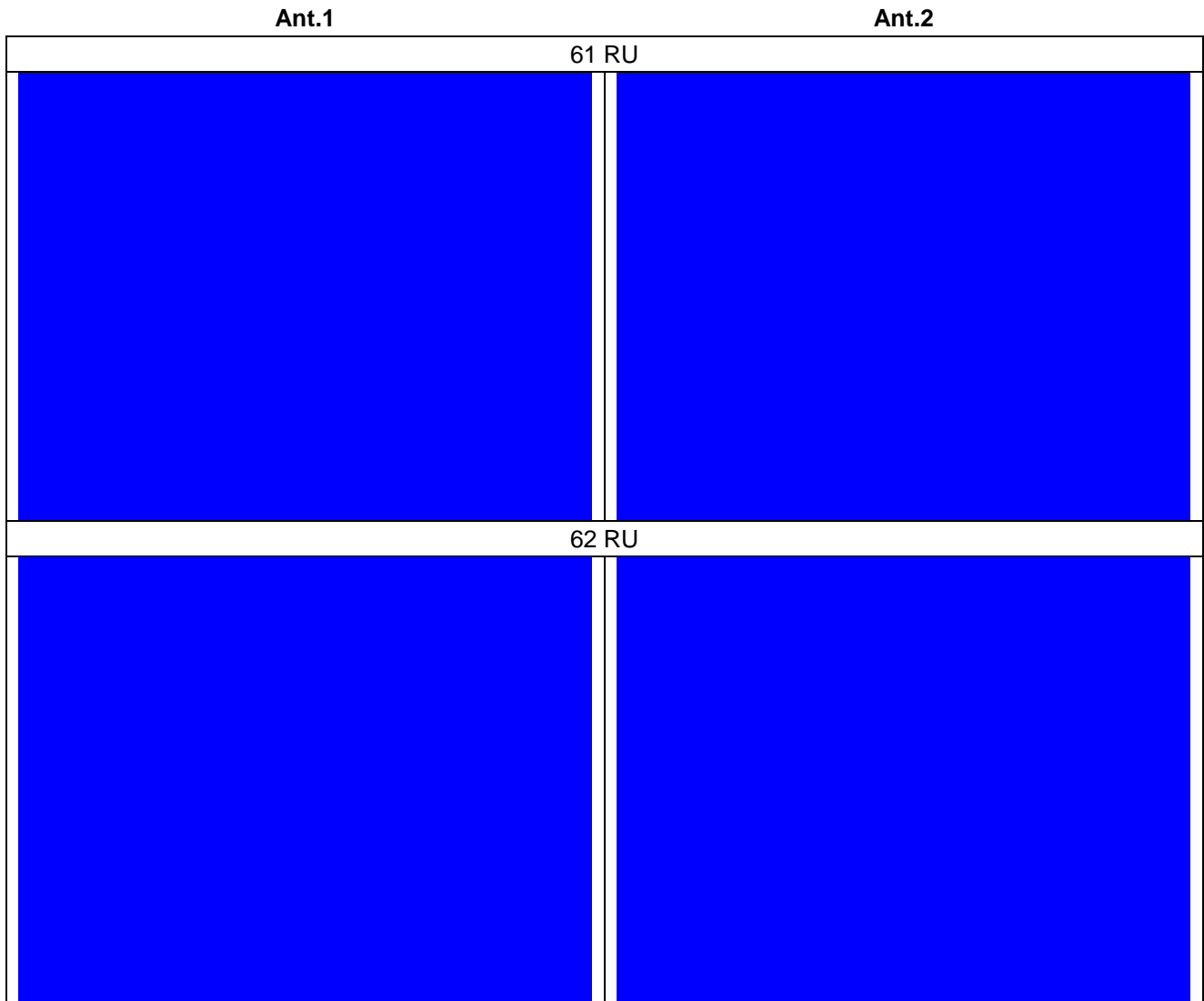
802.11ax_HE40 Band 2C_Low channel_52T



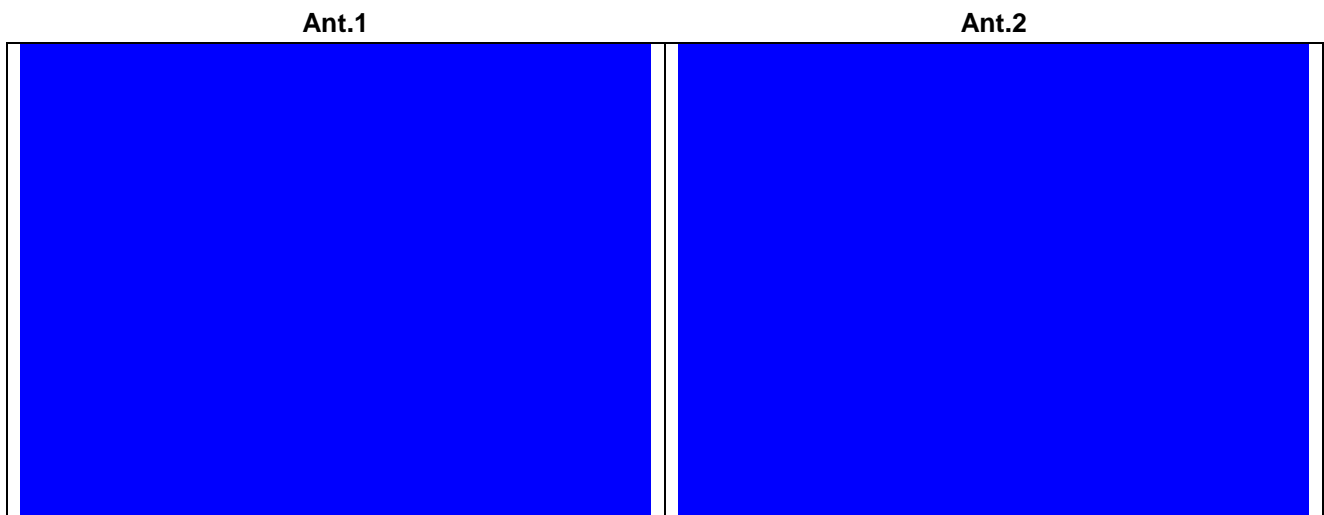
802.11ax_HE40 Band 2C_Low channel_106T



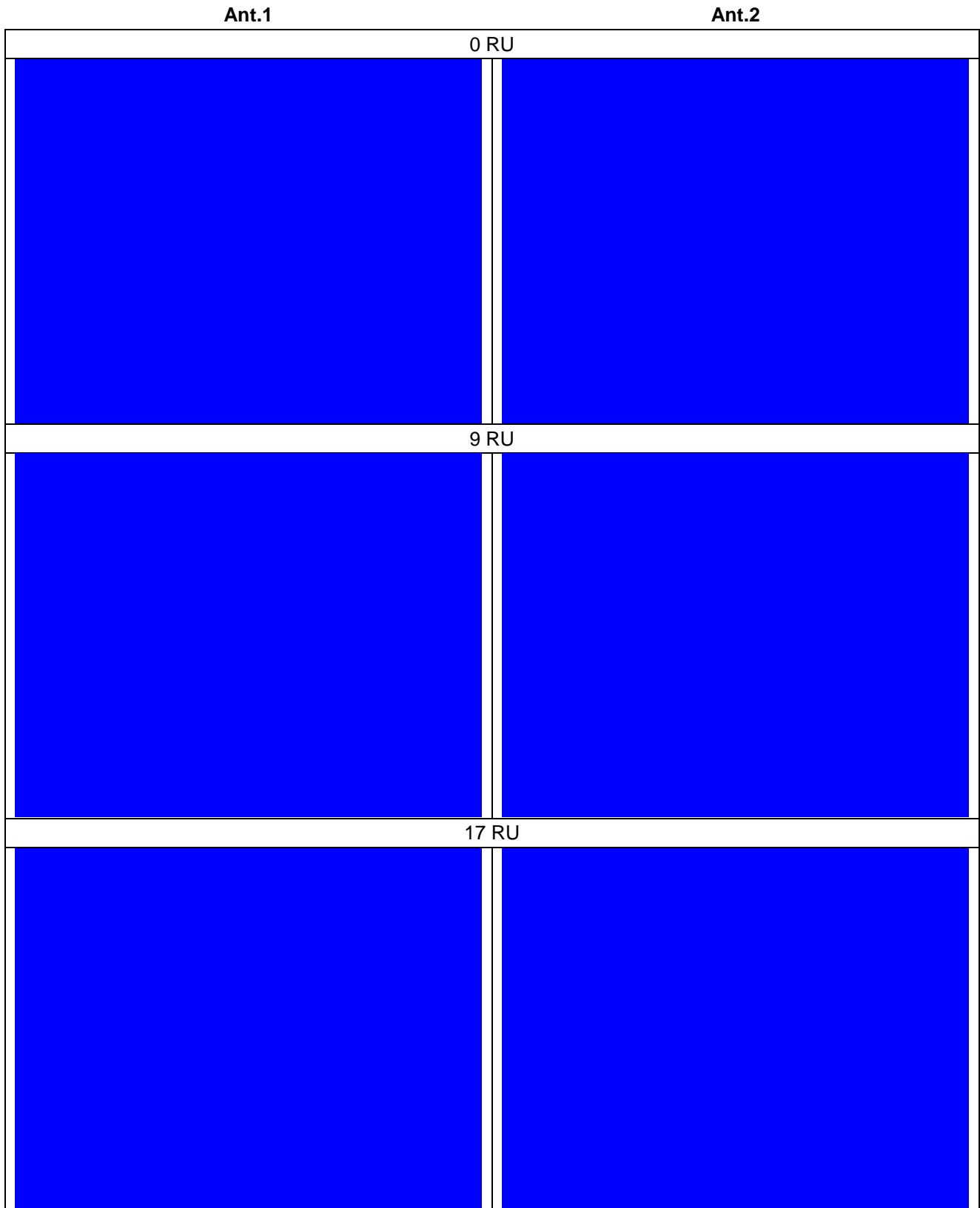
802.11ax_HE40 Band 2C_Low channel_242T



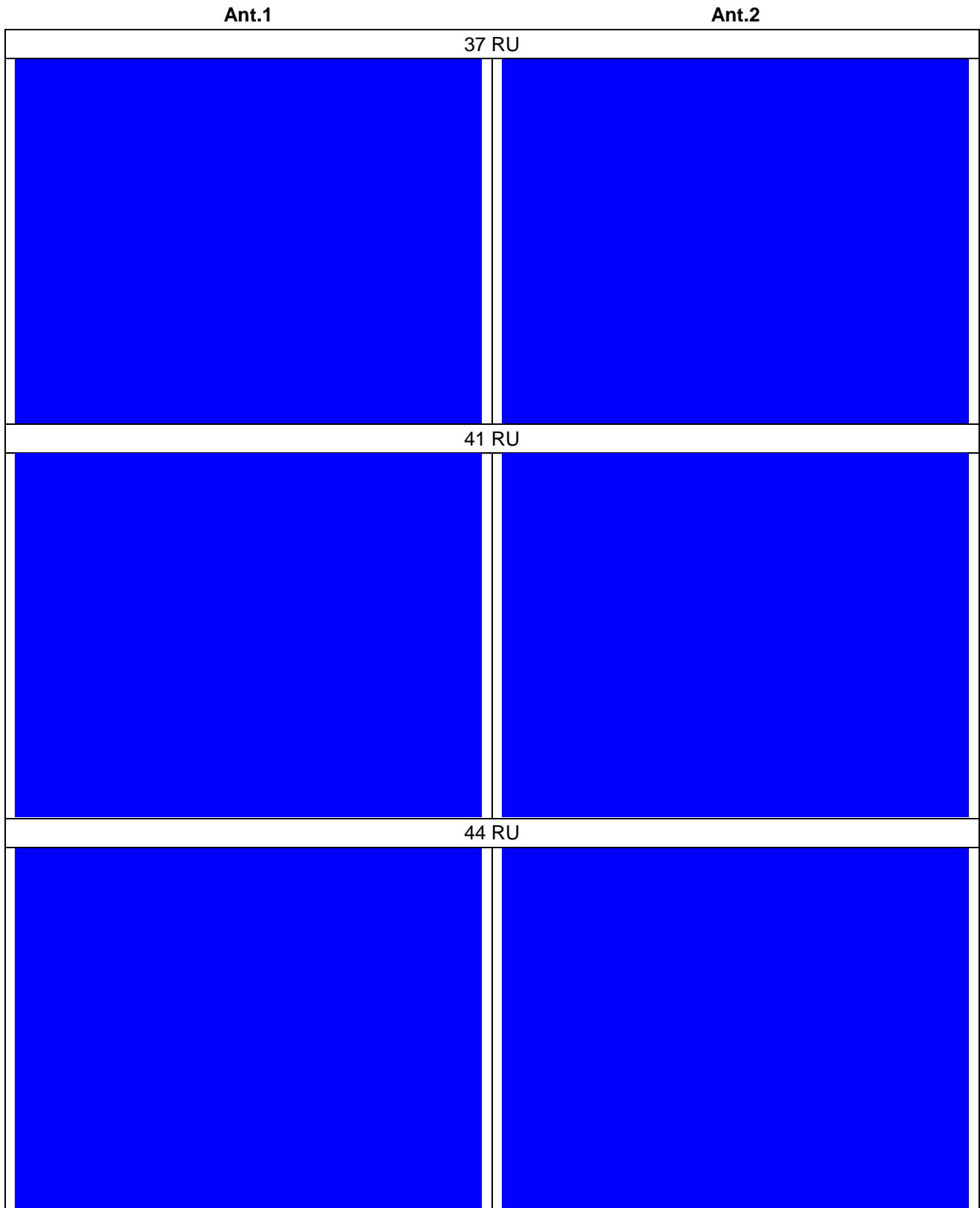
802.11ax_HE40 Band 2C_Low channel_SU



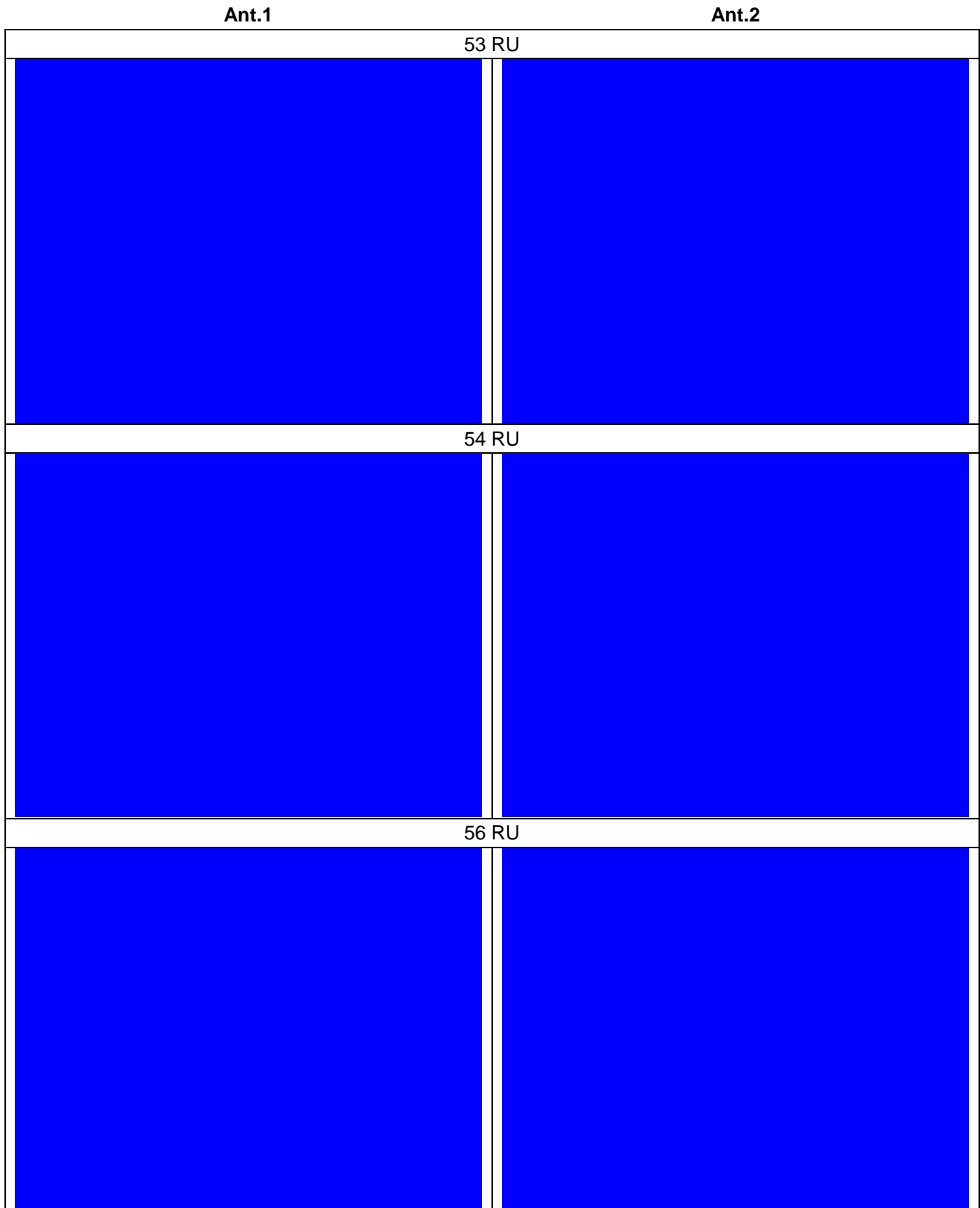
802.11ax_HE40 Band 2C_Middle channel_26T



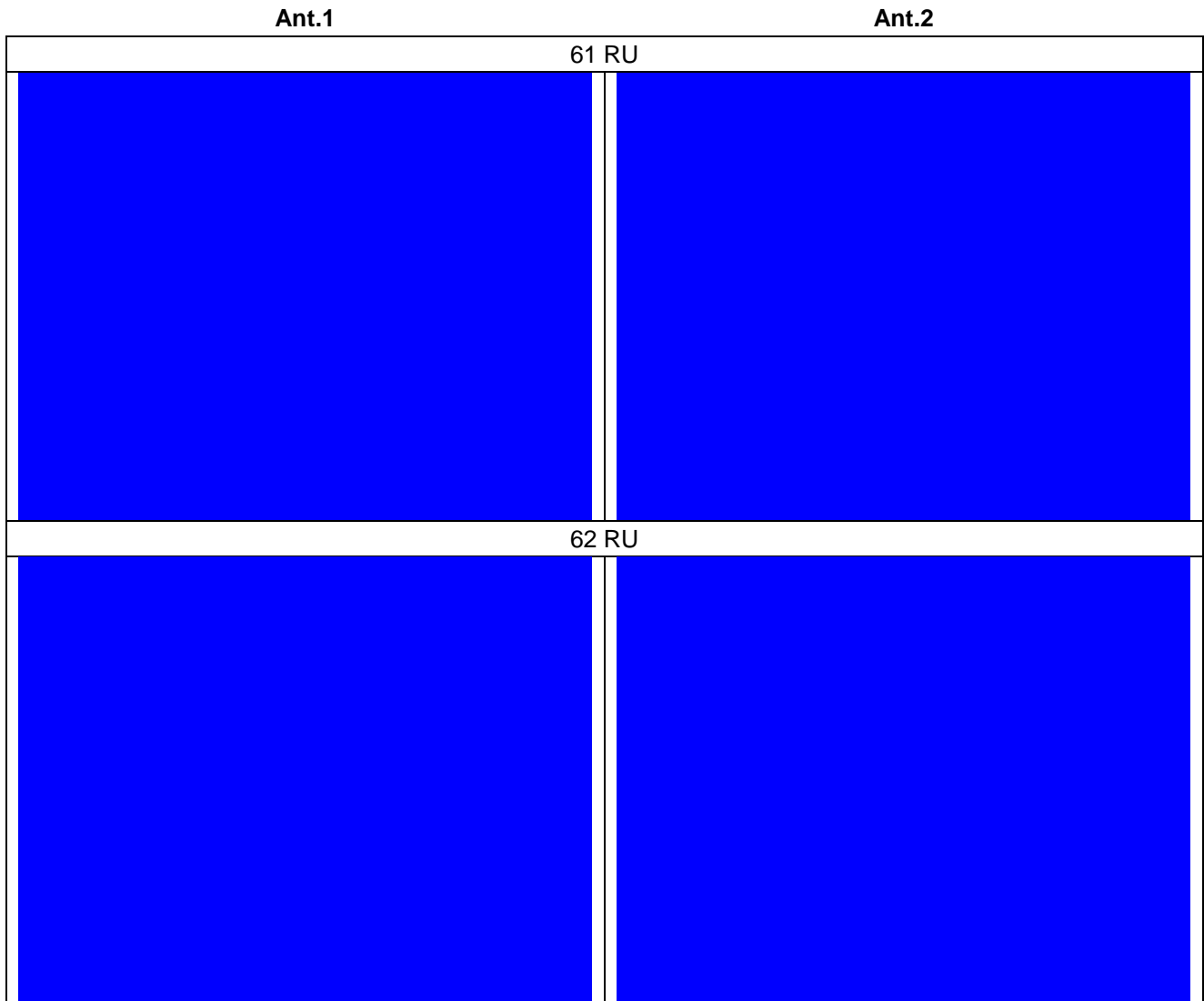
802.11ax_HE40 Band 2C_Middle channel_52T



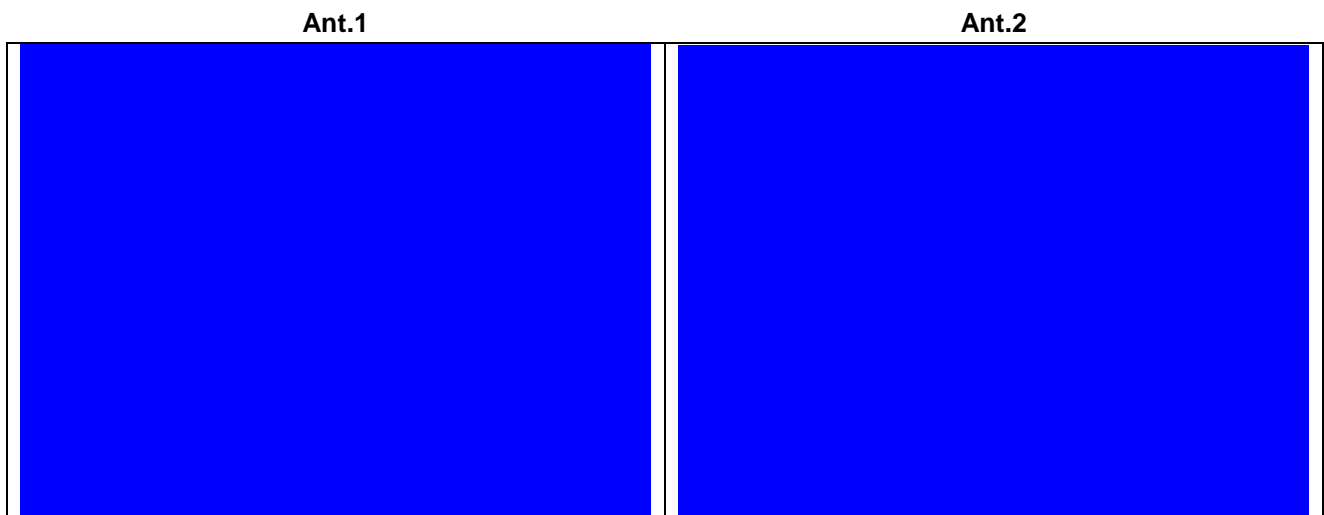
802.11ax_HE40 Band 2C_Middle channel_106T



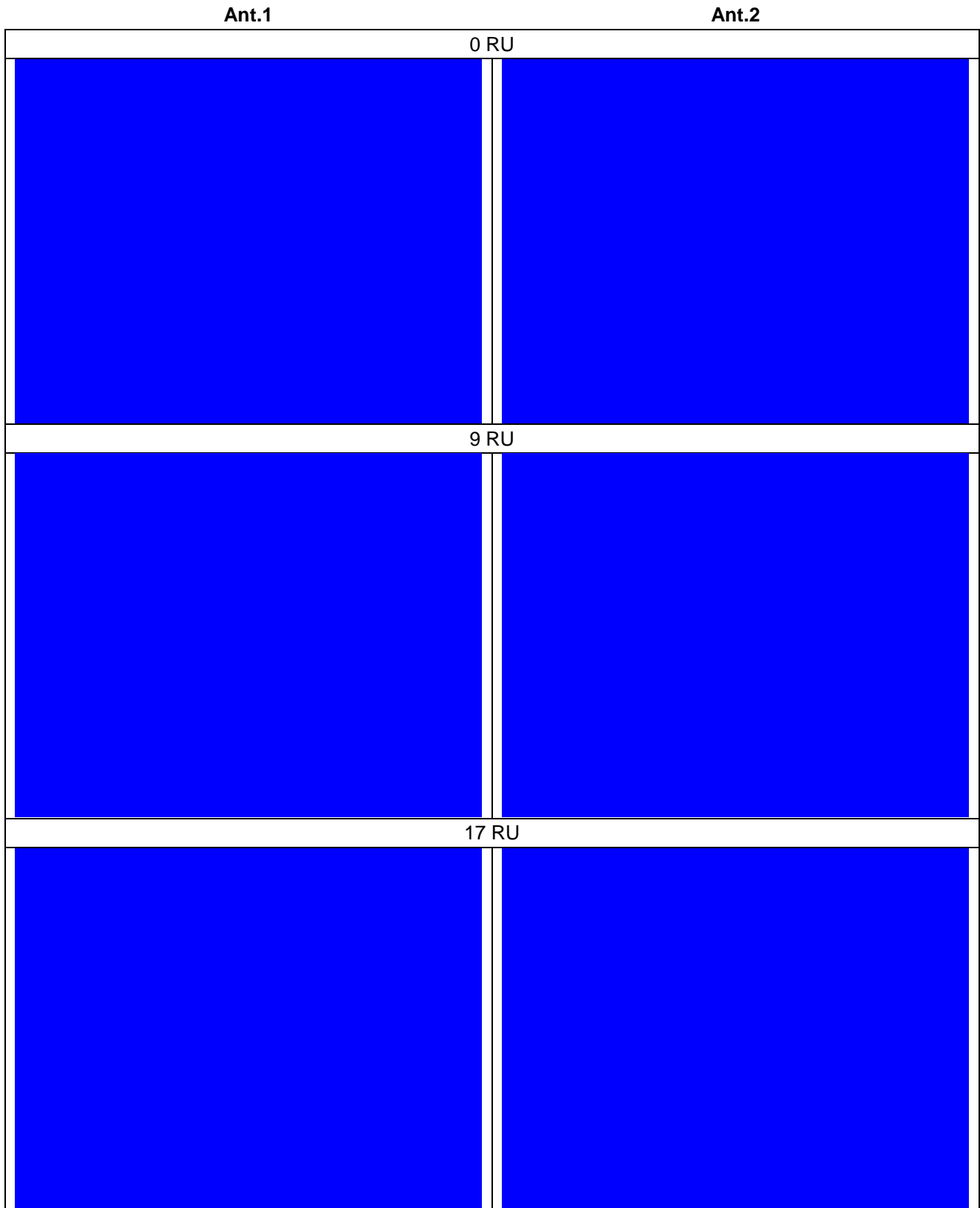
802.11ax_HE40 Band 2C_Middle channel_242T



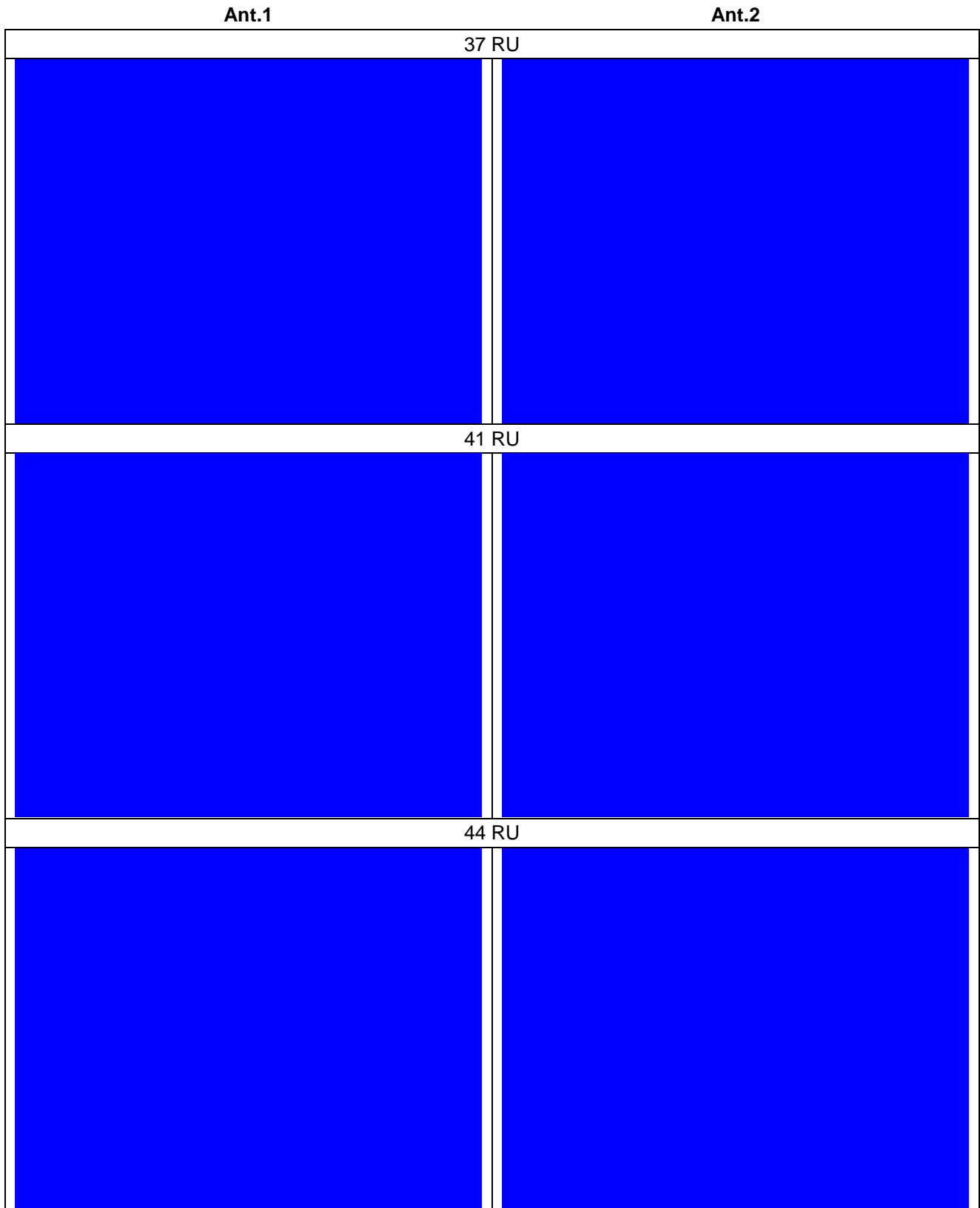
802.11ax_HE40 Band 2C_Middle channel_SU



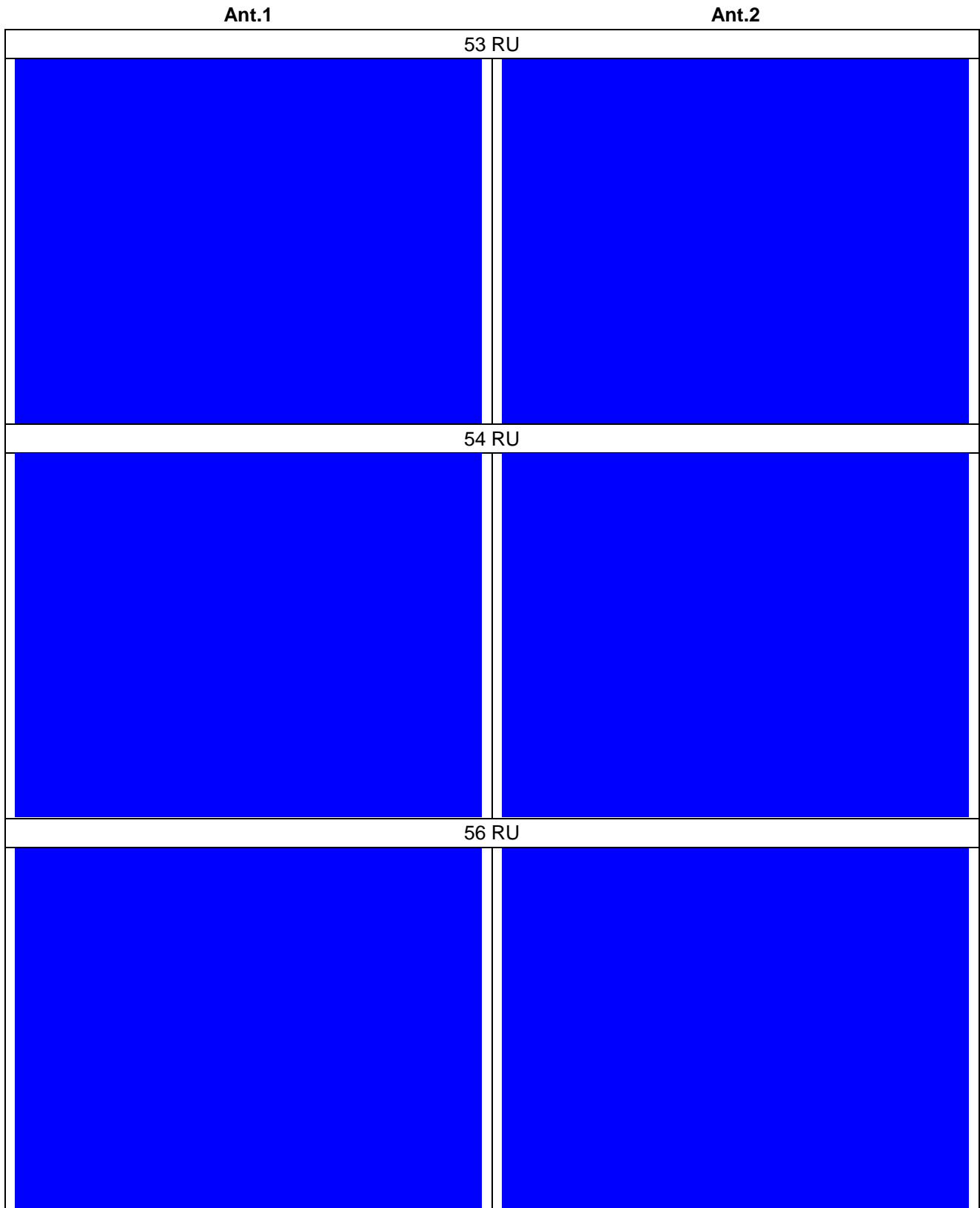
802.11ax_HE40 Band 2C_High channel_26T



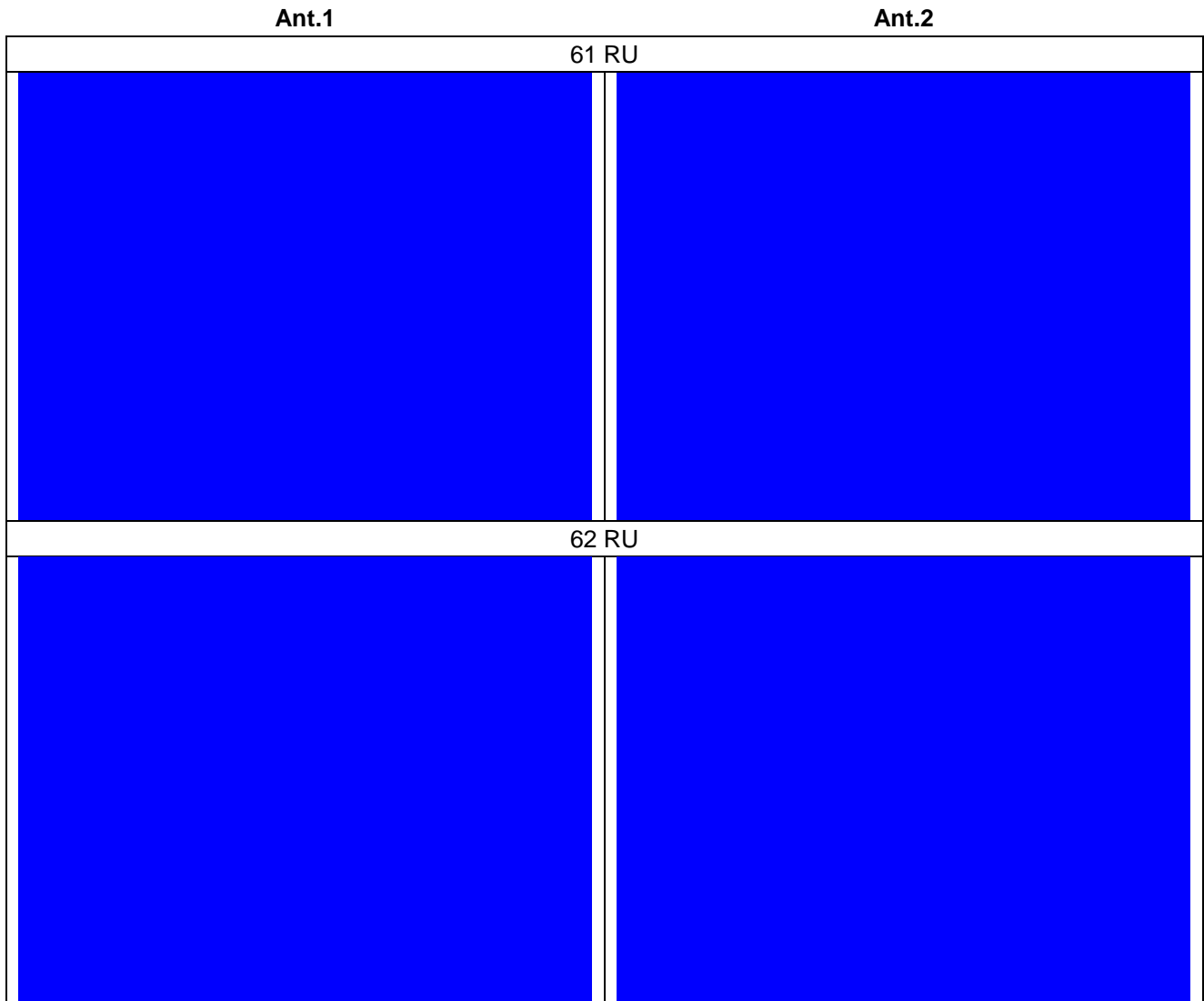
802.11ax_HE40 Band 2C_High channel_52T



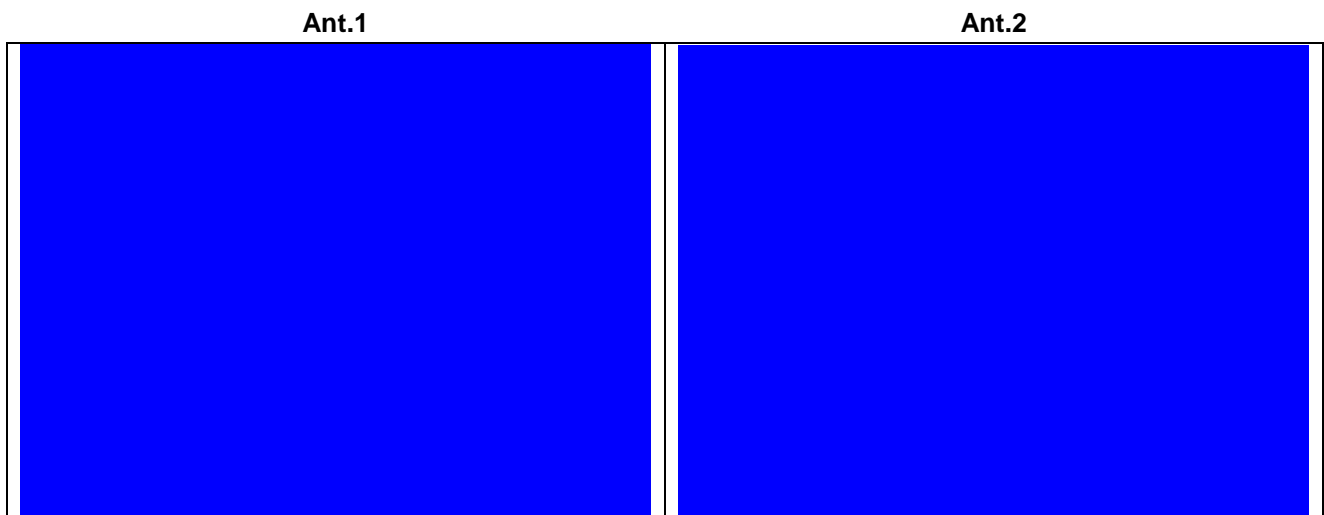
802.11ax_HE40 Band 2C_High channel_106T



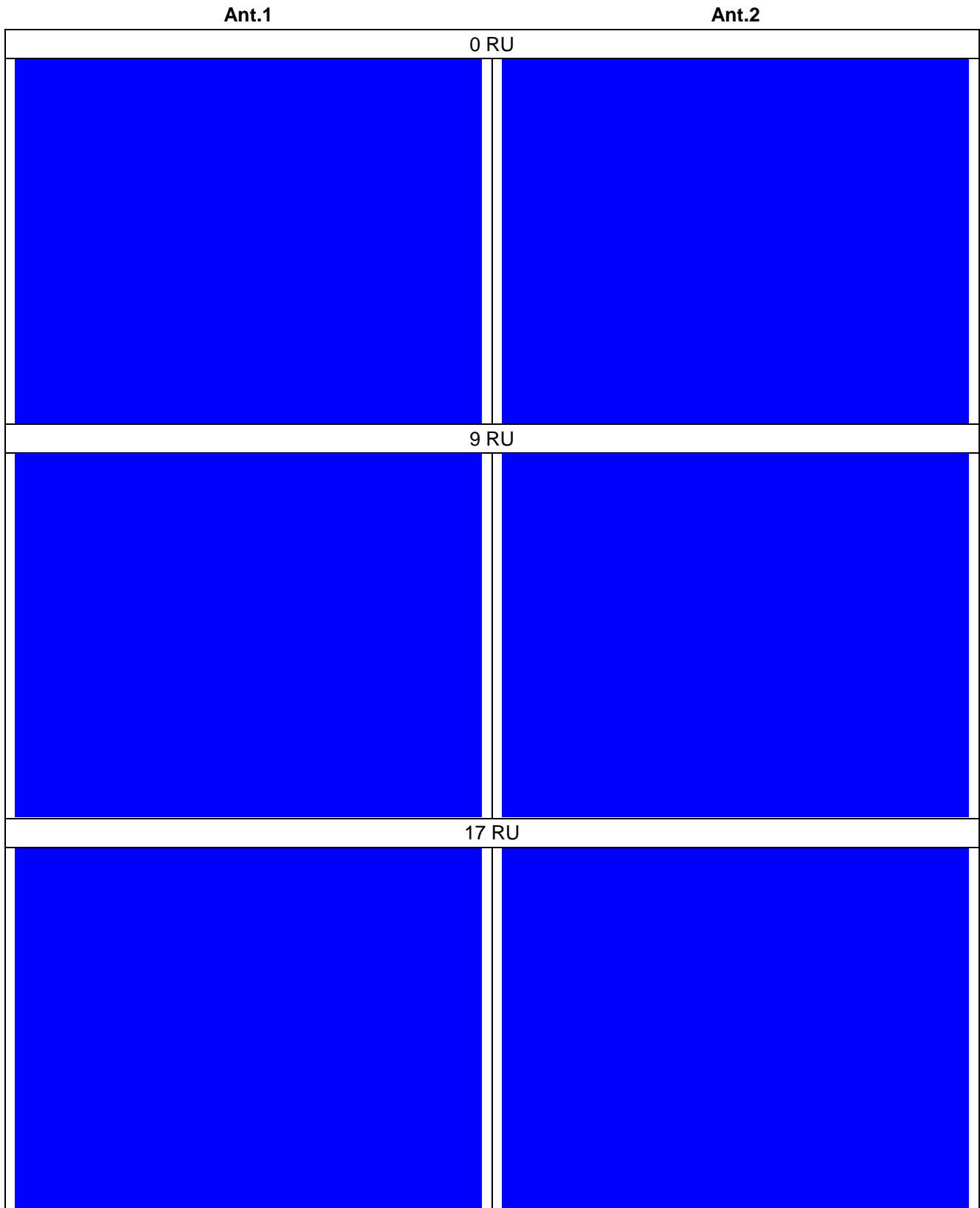
802.11ax_HE40 Band 2C_High channel_242T



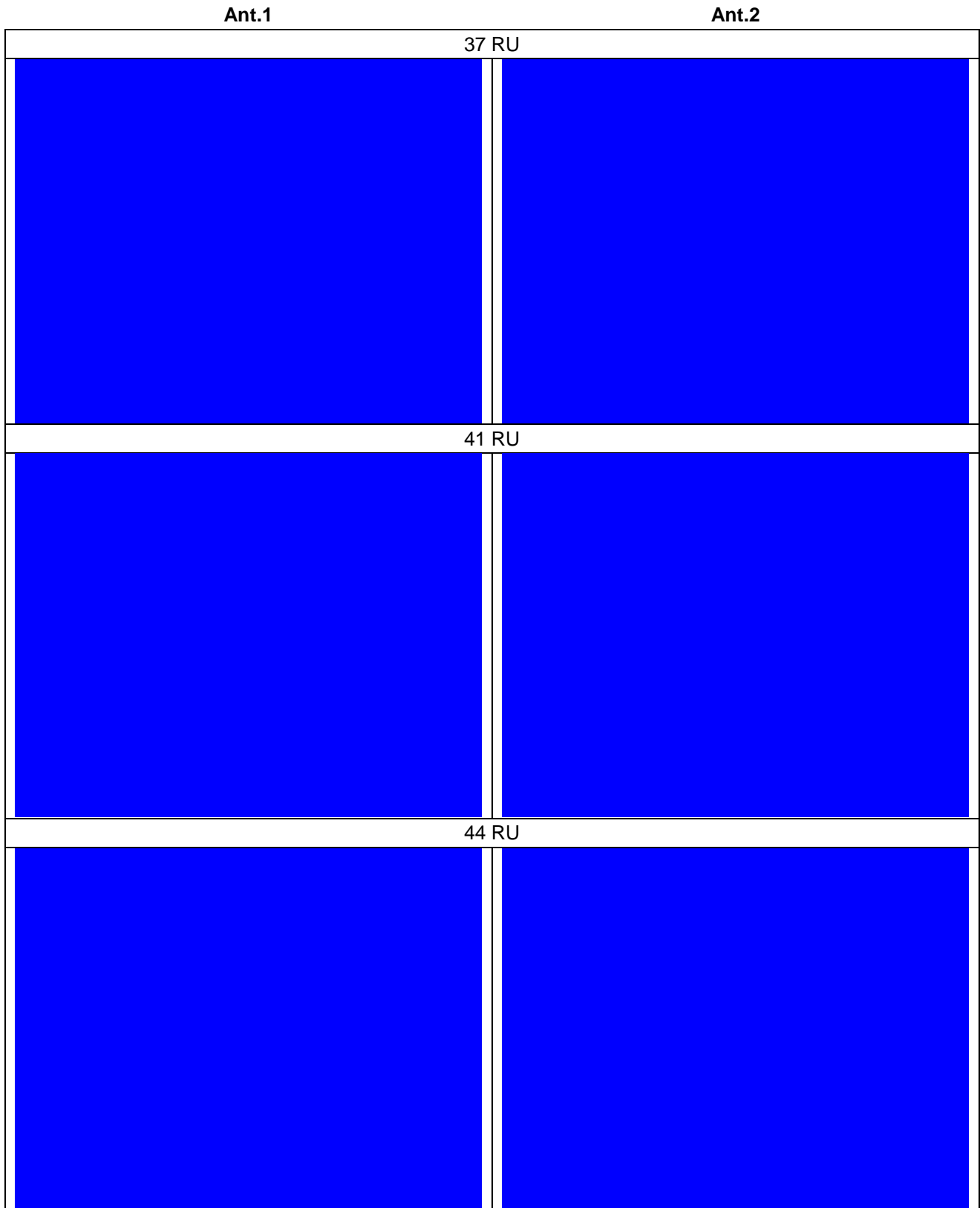
802.11ax_HE40 Band 2C_High channel_SU



802.11ax_HE40 Band 3_Low channel_26T



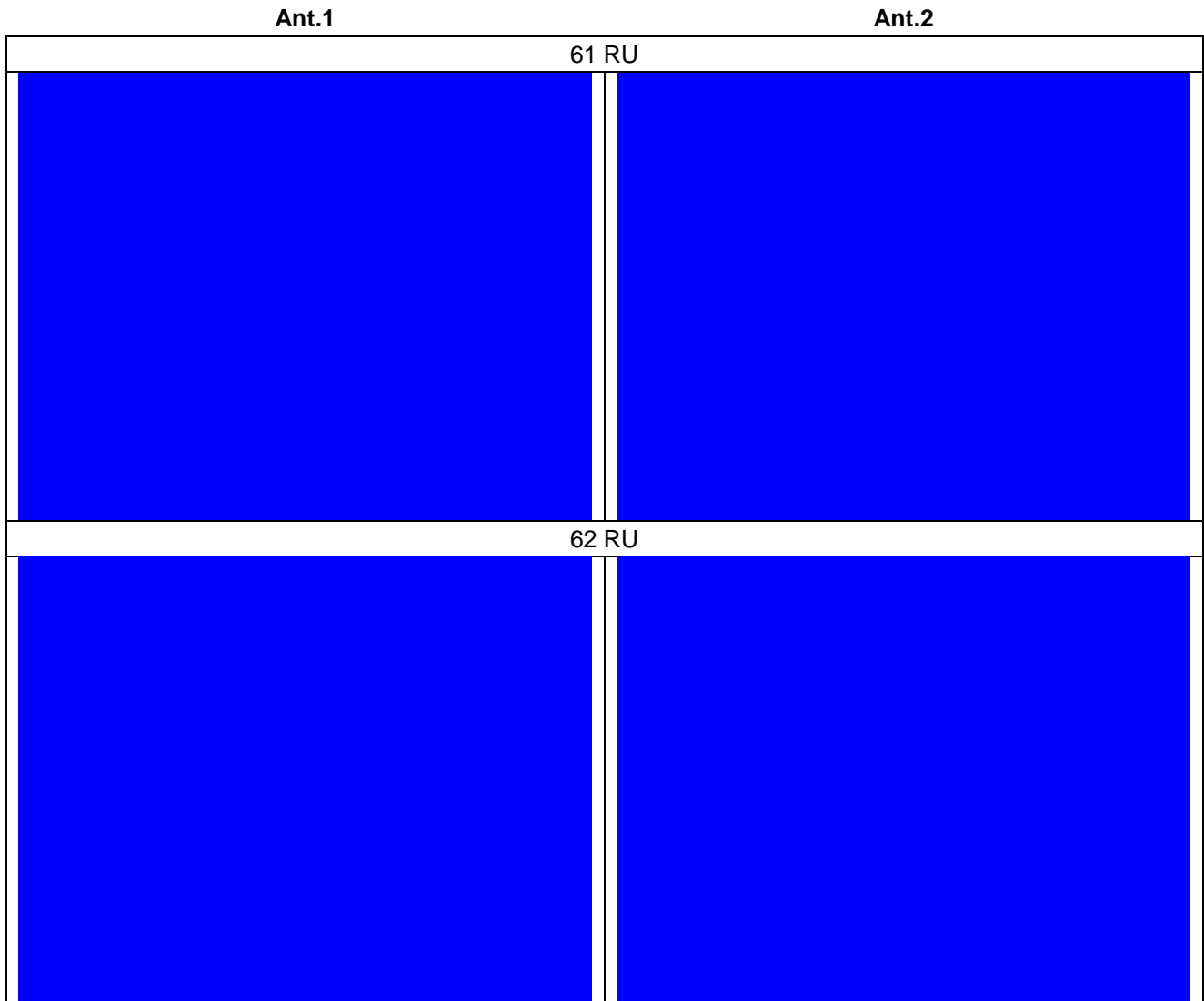
802.11ax_HE40 Band 3_Low channel_52T



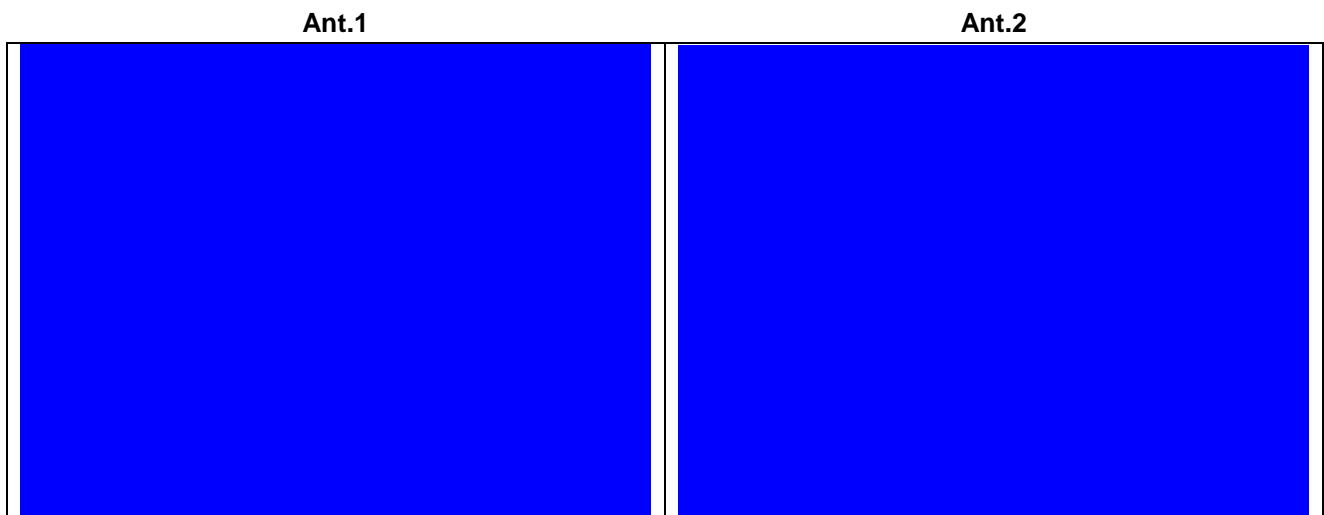
802.11ax_HE40 Band 3_Low channel_106T

Ant.1	Ant.2
53 RU	
54 RU	
56 RU	

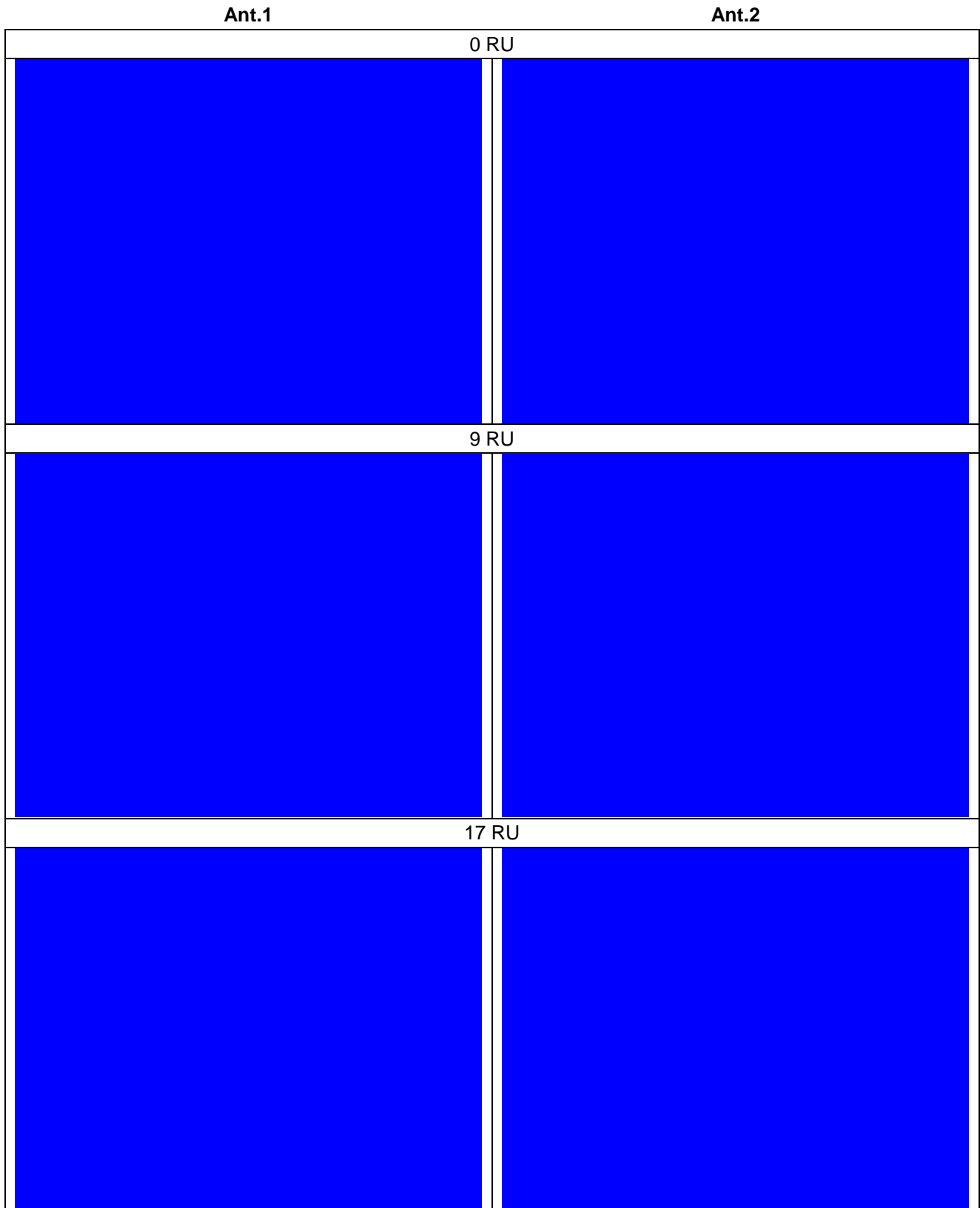
802.11ax_HE40 Band 3_Low channel_242T



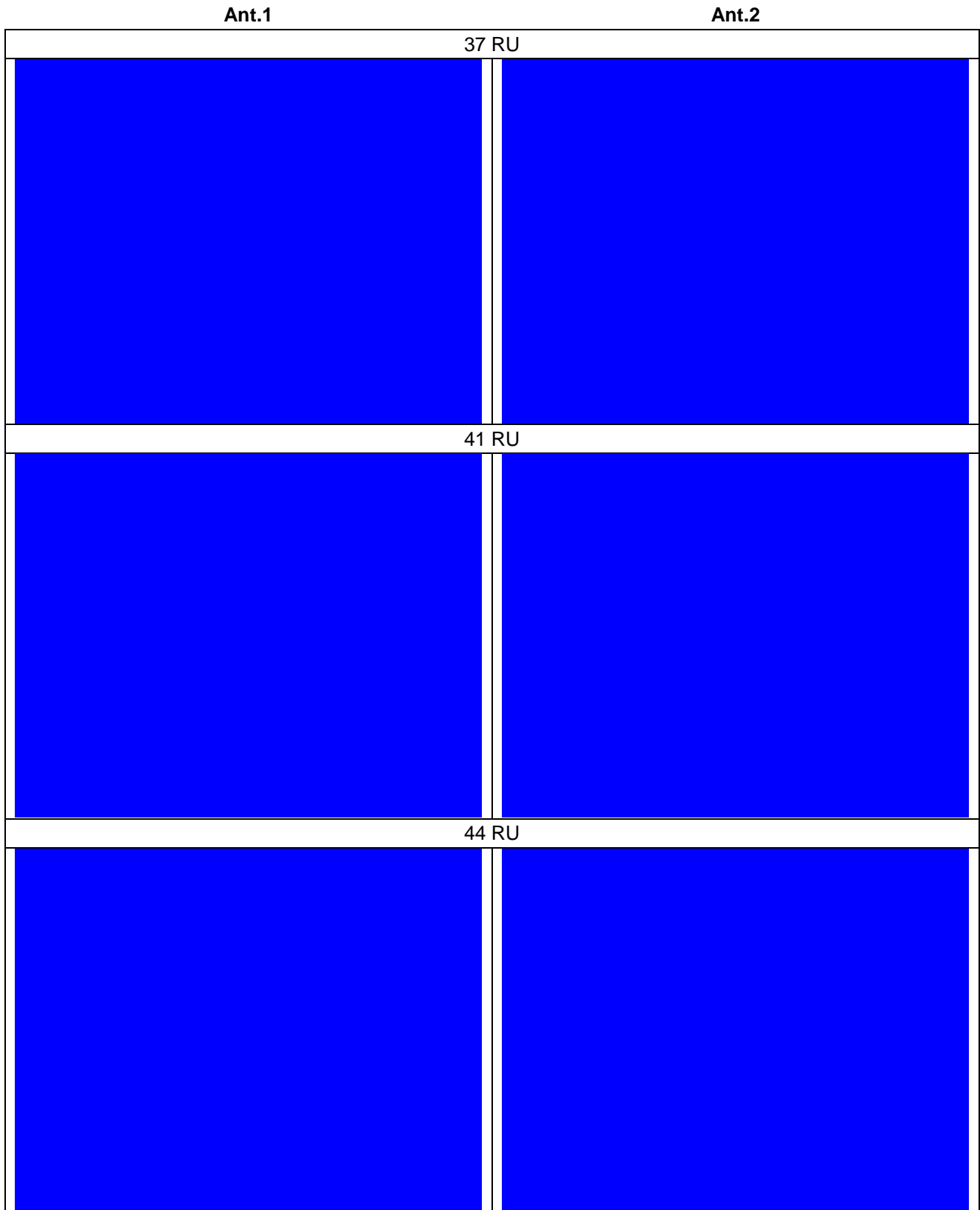
802.11ax_HE40 Band 3_Low channel_SU



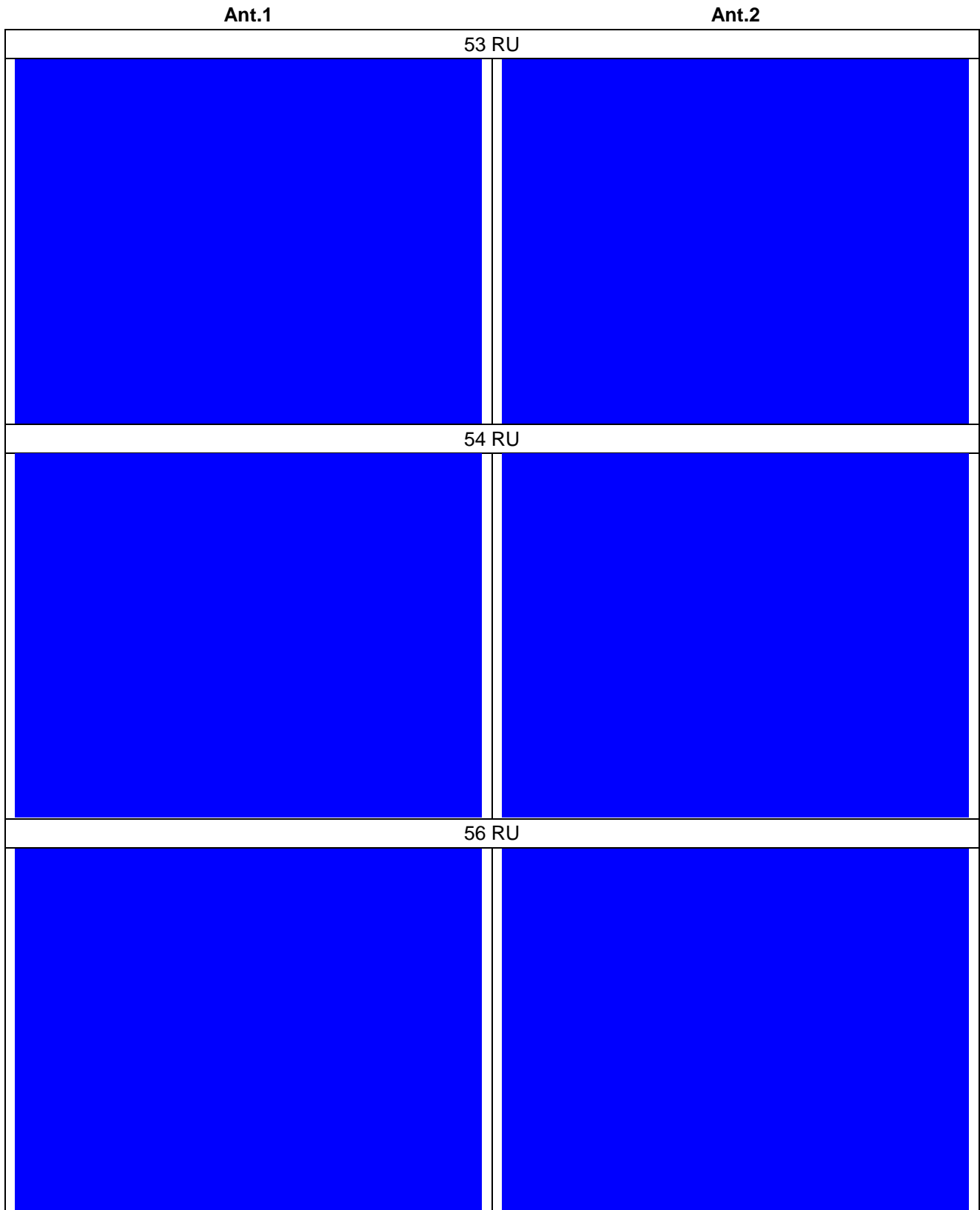
802.11ax_HE40 Band 3_High channel_26T



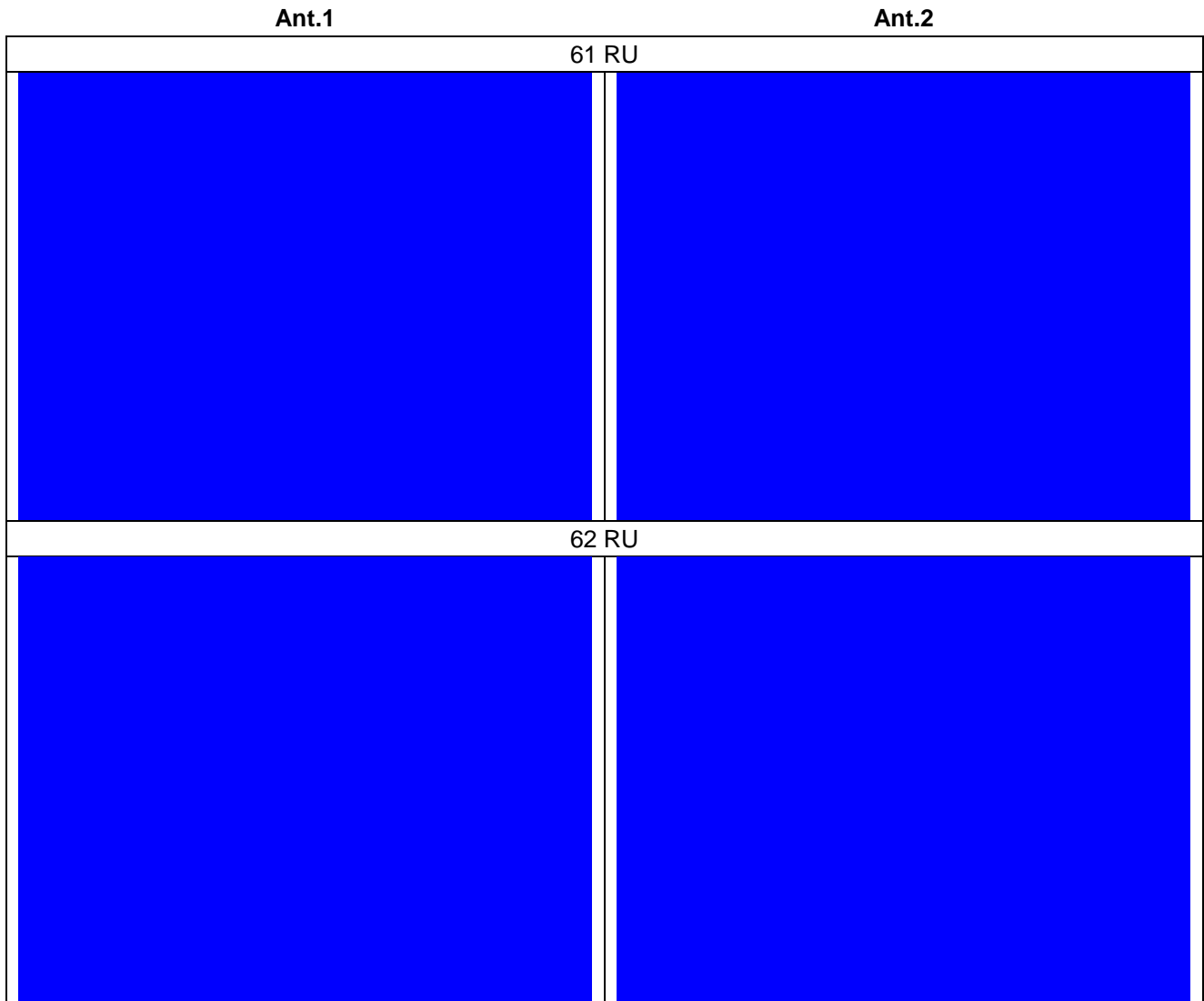
802.11ax_HE40 Band 3_High channel_52T



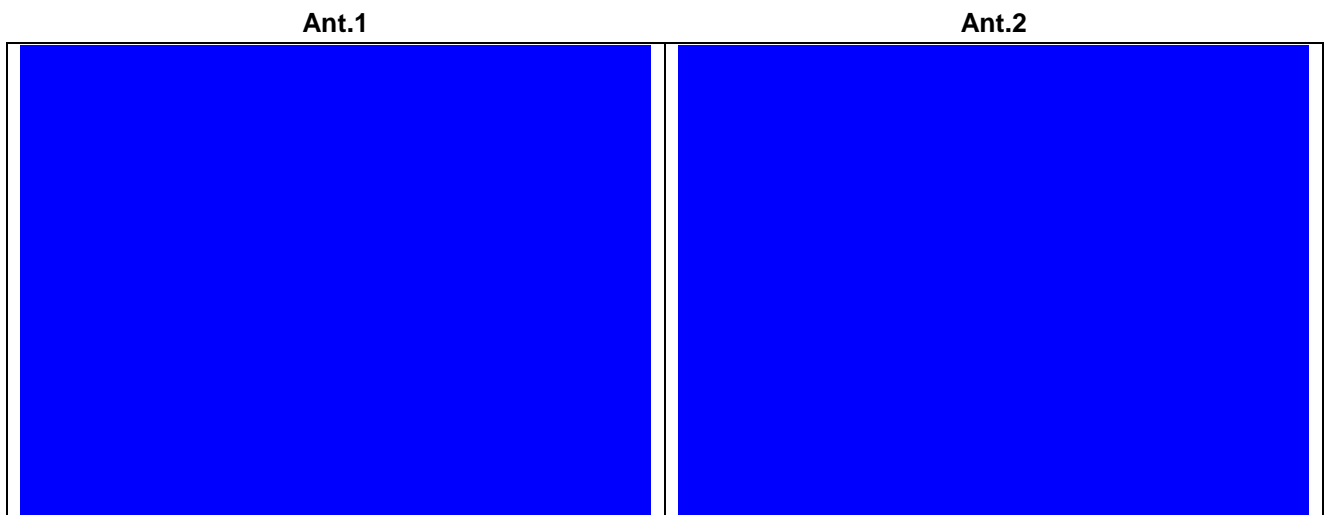
802.11ax_HE40 Band 3_High channel_106T



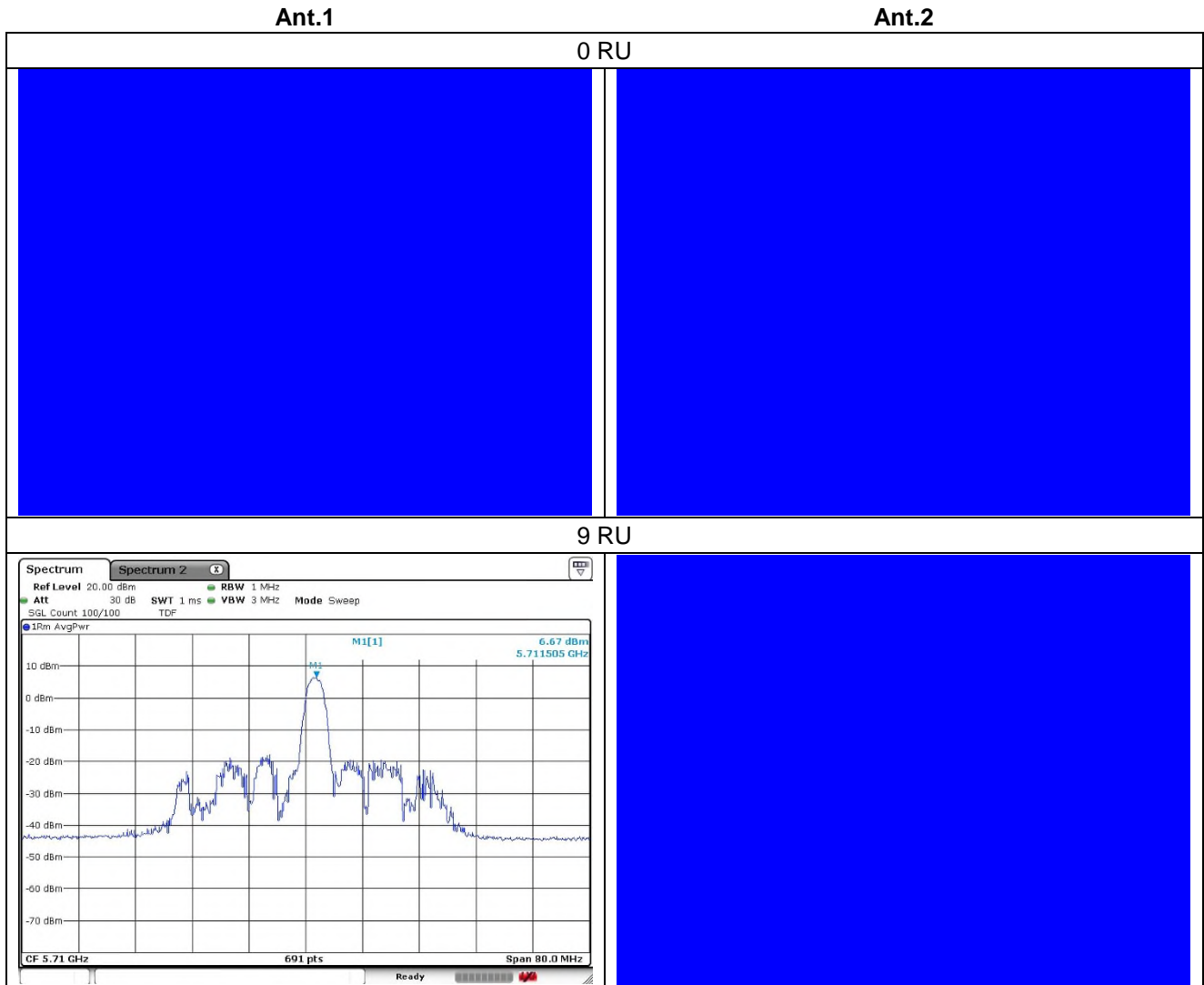
802.11ax_HE40 Band 3_High channel_242T



802.11ax_HE40 Band 3_High channel_SU



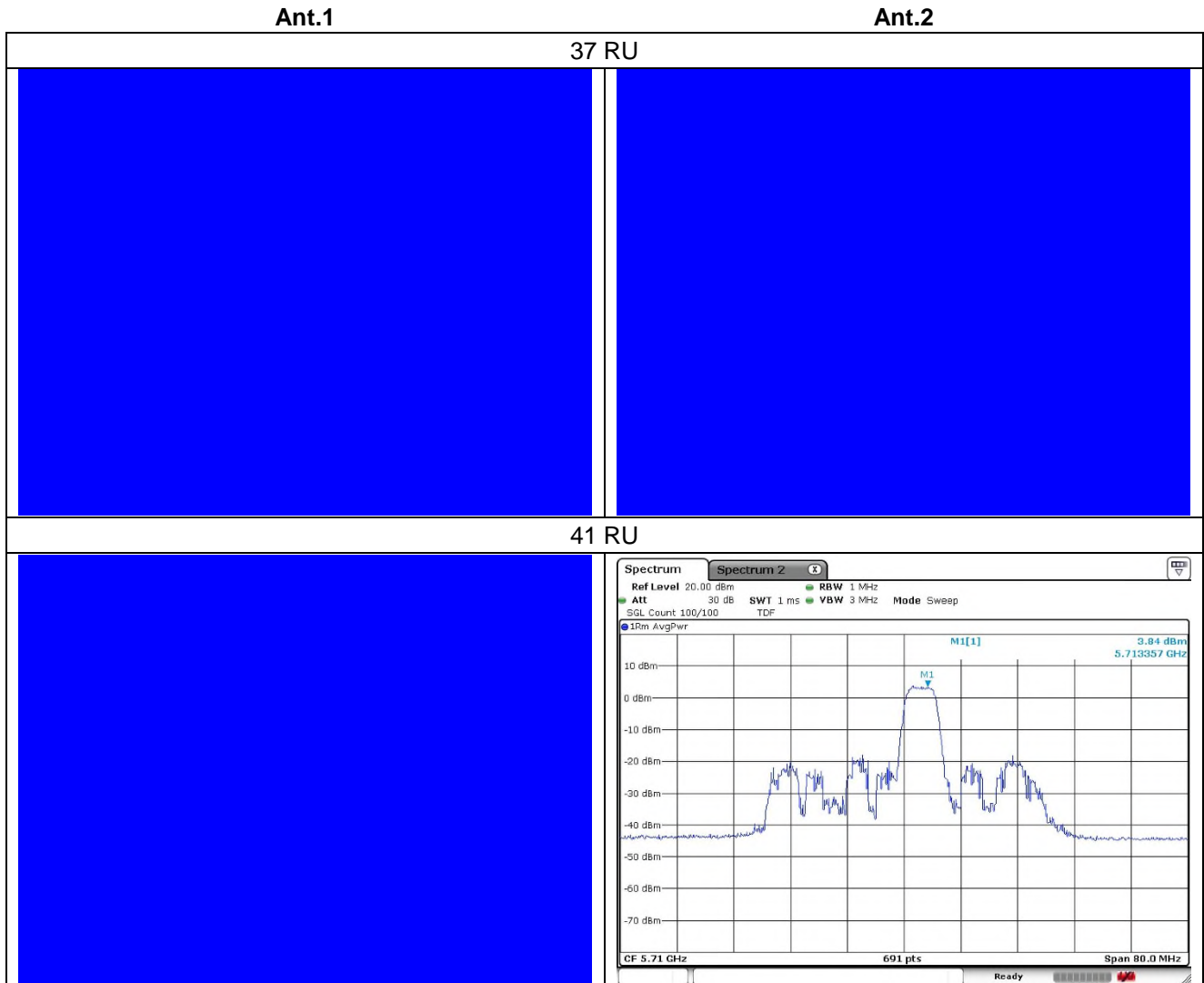
802.11ax_HE40 Band 2C_Straddle channel_26T



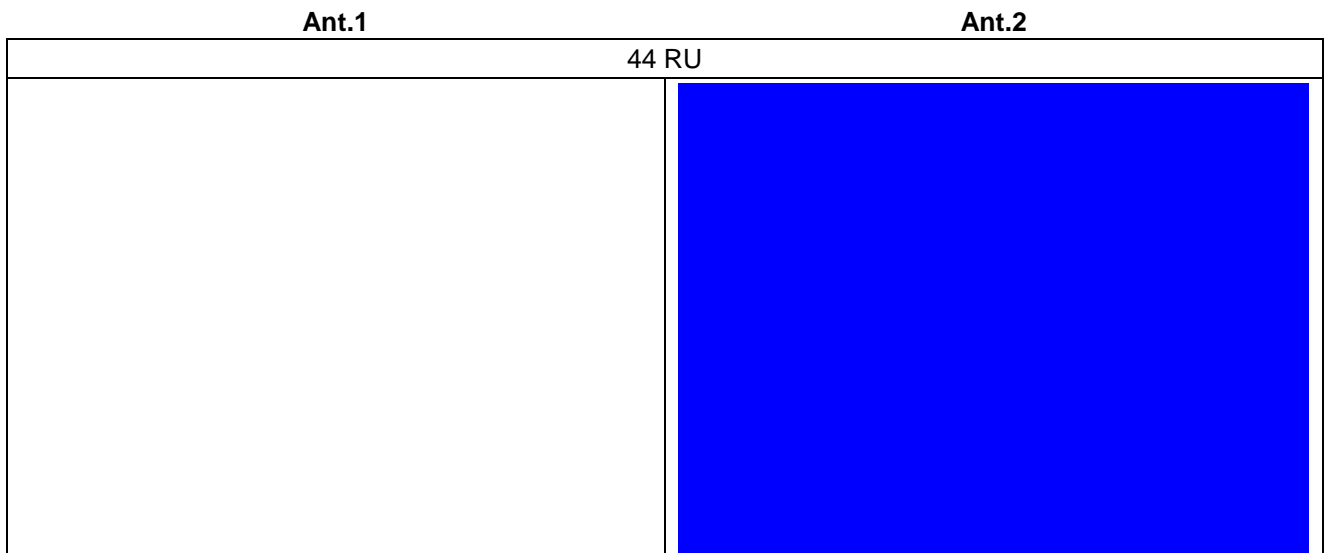
802.11ax_HE40 Band 3_Straddle channel_26T



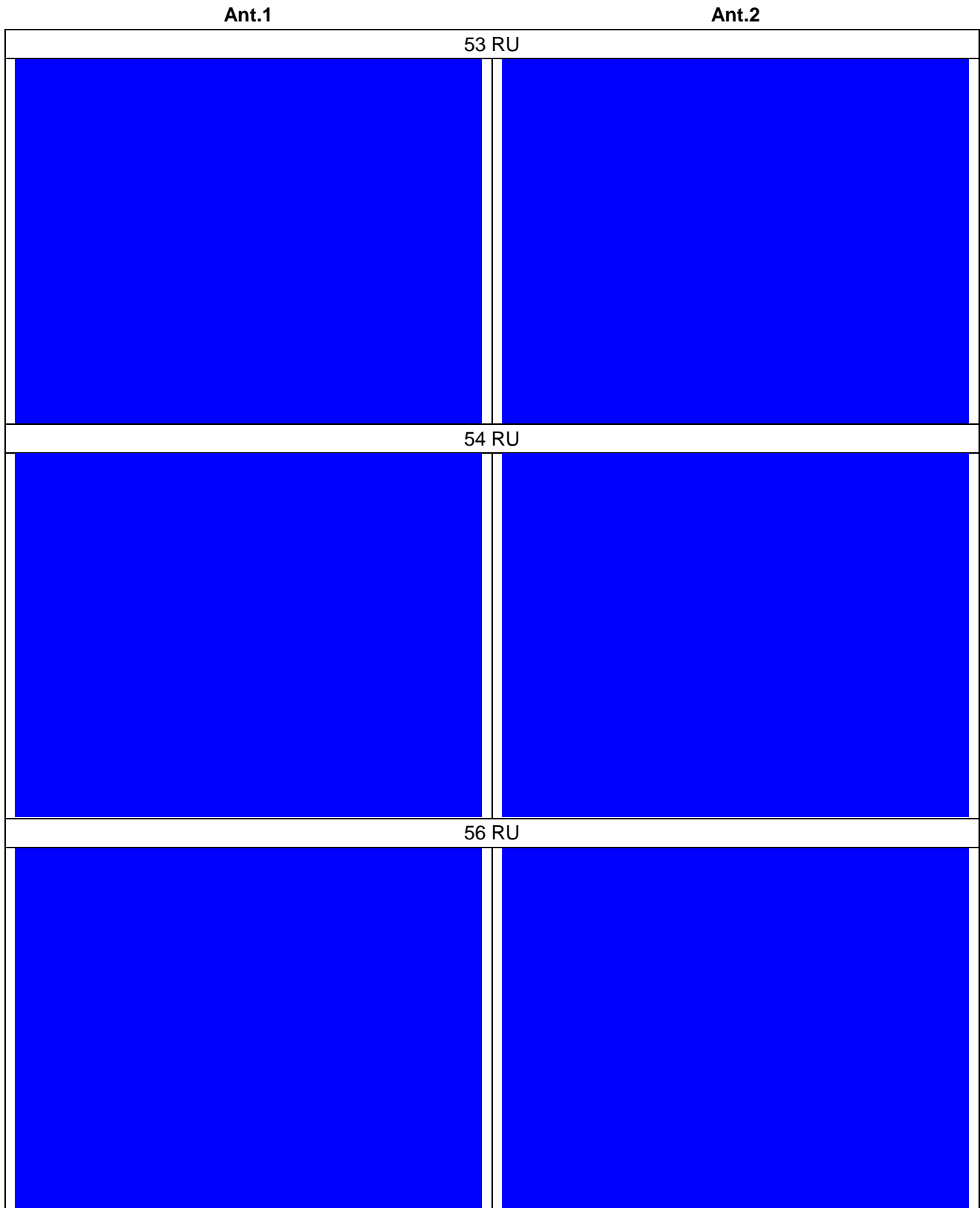
802.11ax_HE40 Band 2C_Straddle channel_52T



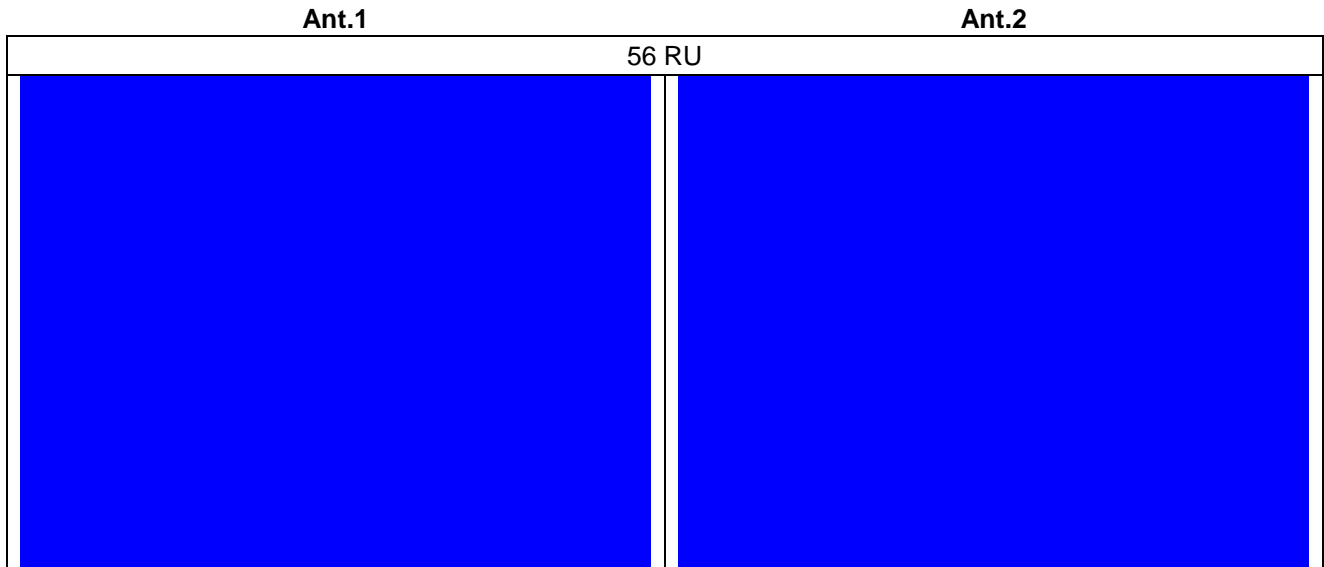
802.11ax_HE40 Band 3_Straddle channel_52T



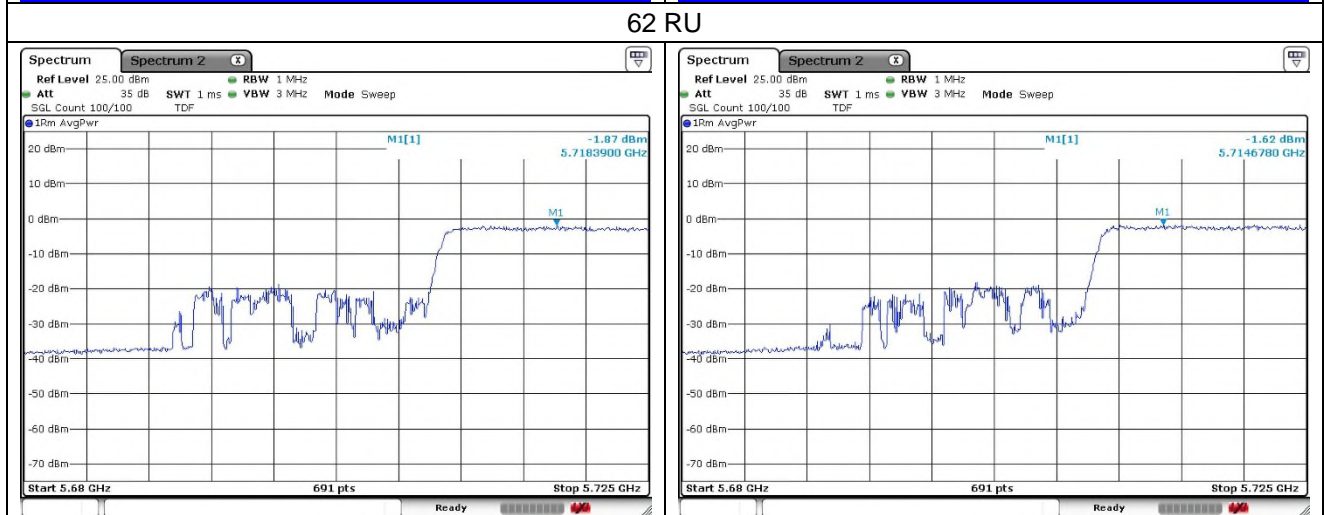
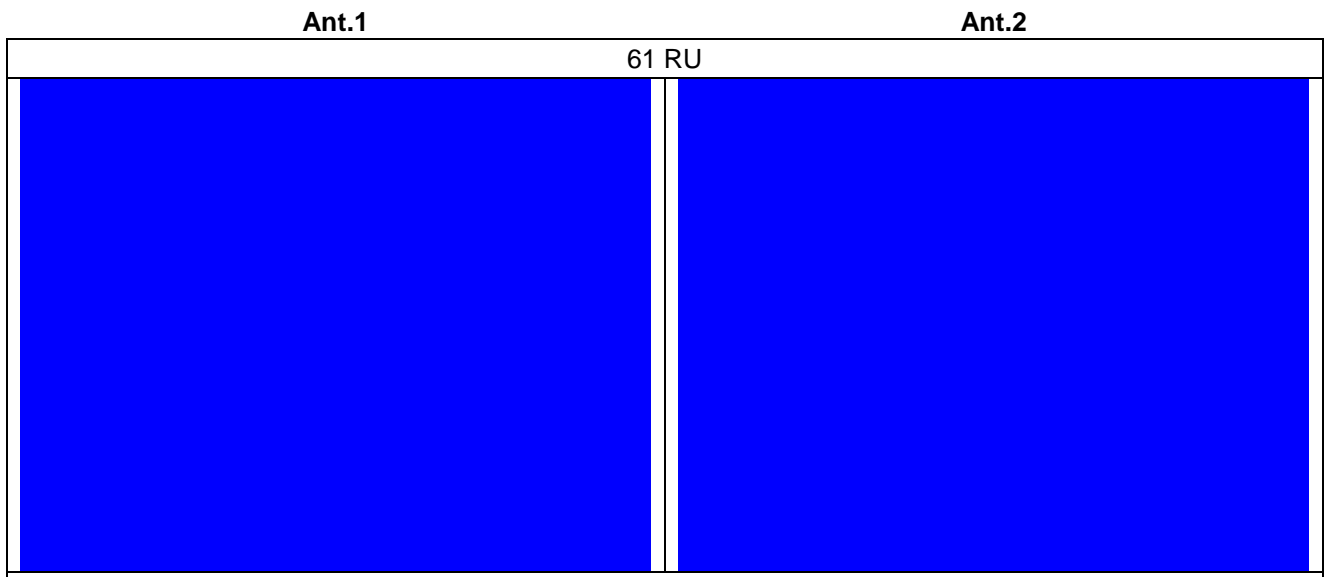
802.11ax_HE40 Band 2C_Straddle channel_106T



802.11ax_HE40 Band 3_Straddle channel_106T



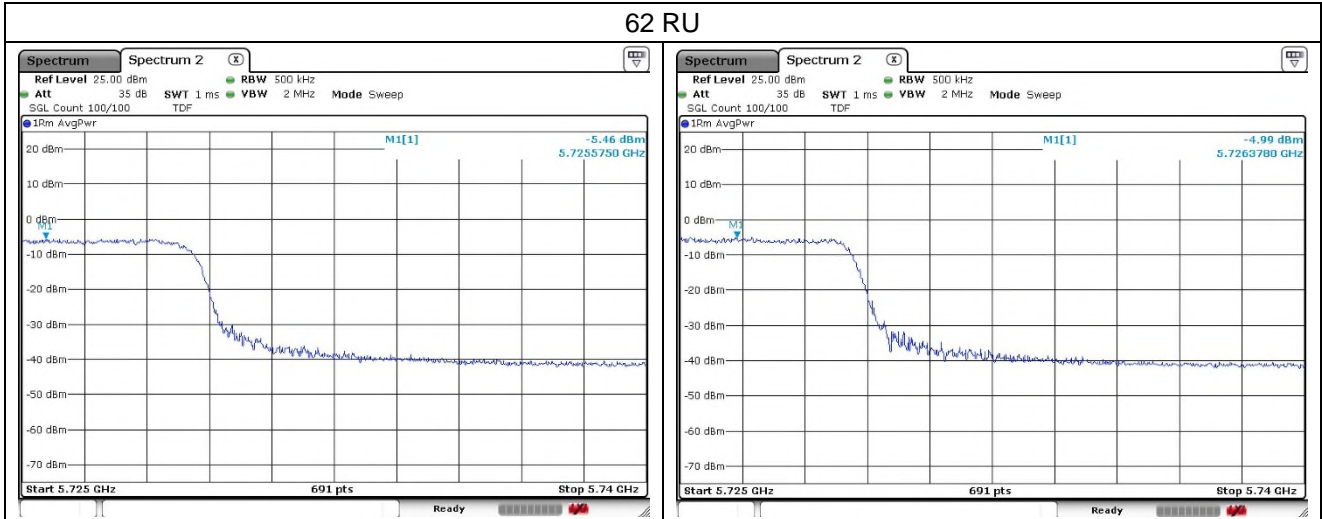
802.11ax_HE40 Band 2C_Straddle channel_242T



802.11ax_HE40 Band 3_Straddle channel_242T

Ant.1

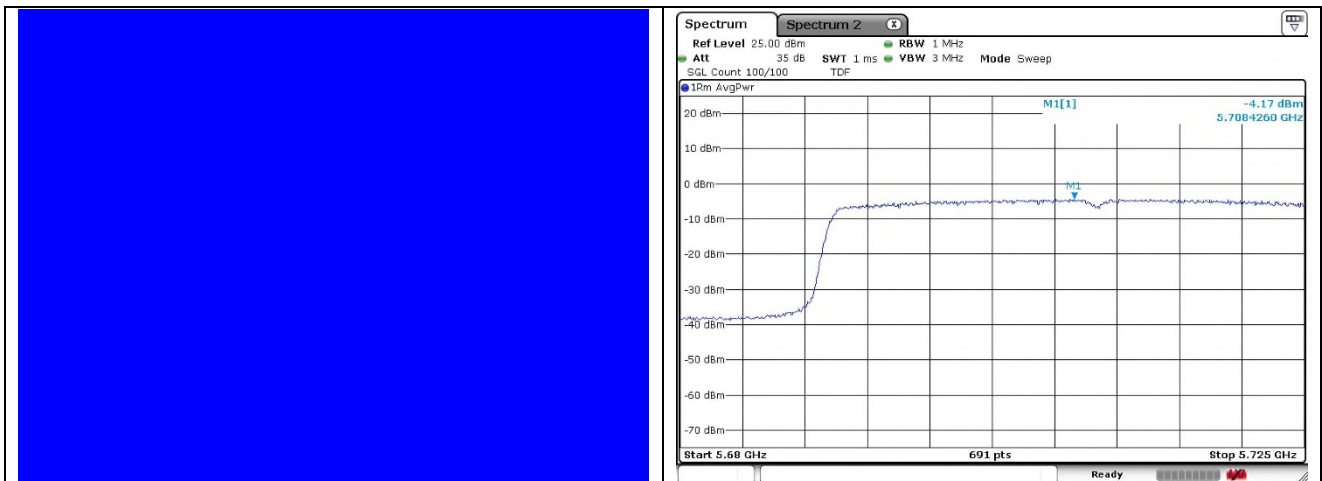
Ant.2



802.11ax_HE40 Band 2C_Straddle channel_SU

Ant.1

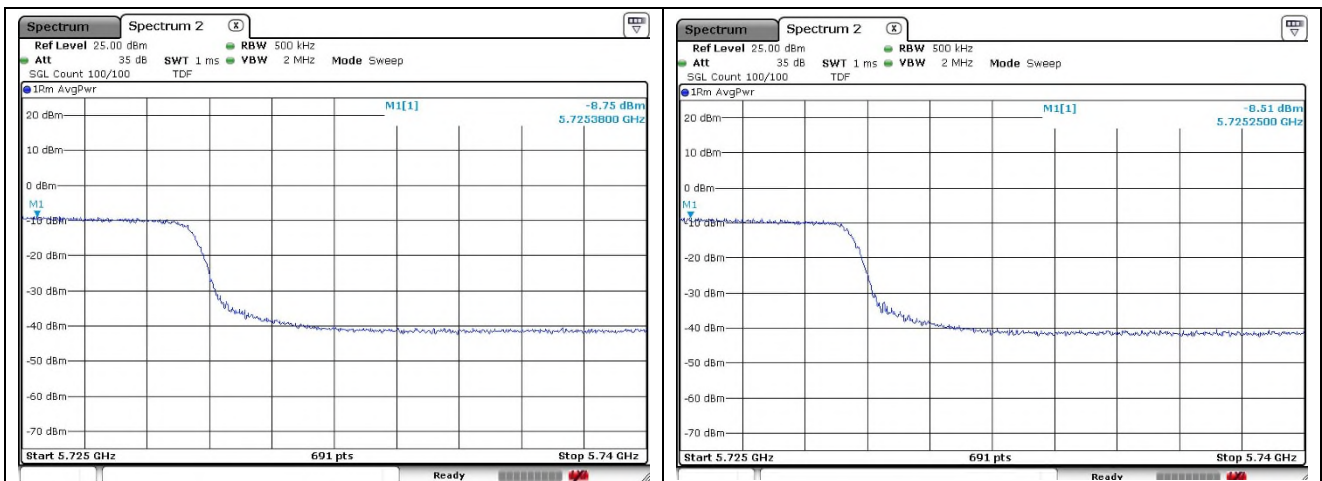
Ant.2



802.11ax_HE40 Band 3_Straddle channel_SU

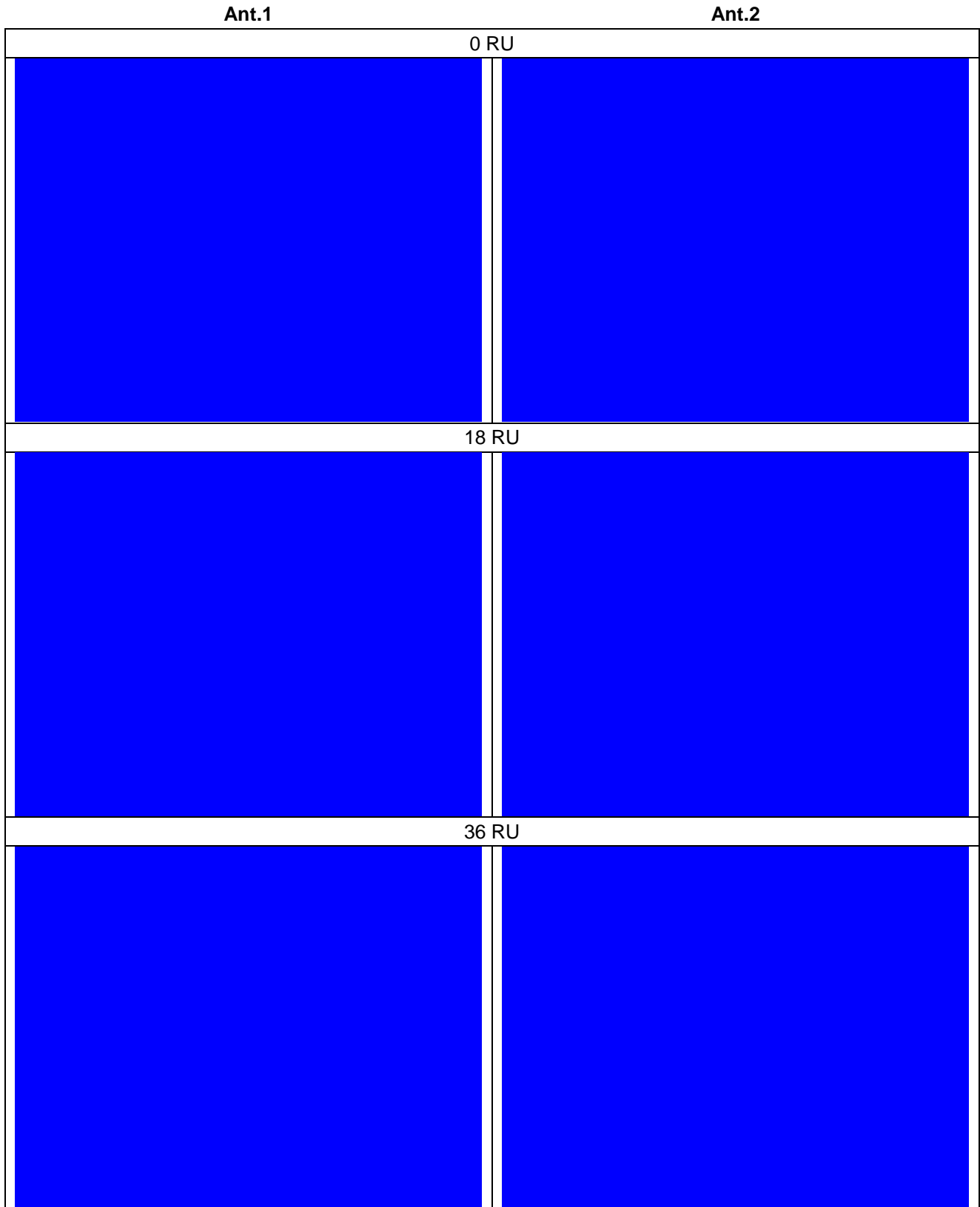
Ant.1

Ant.2

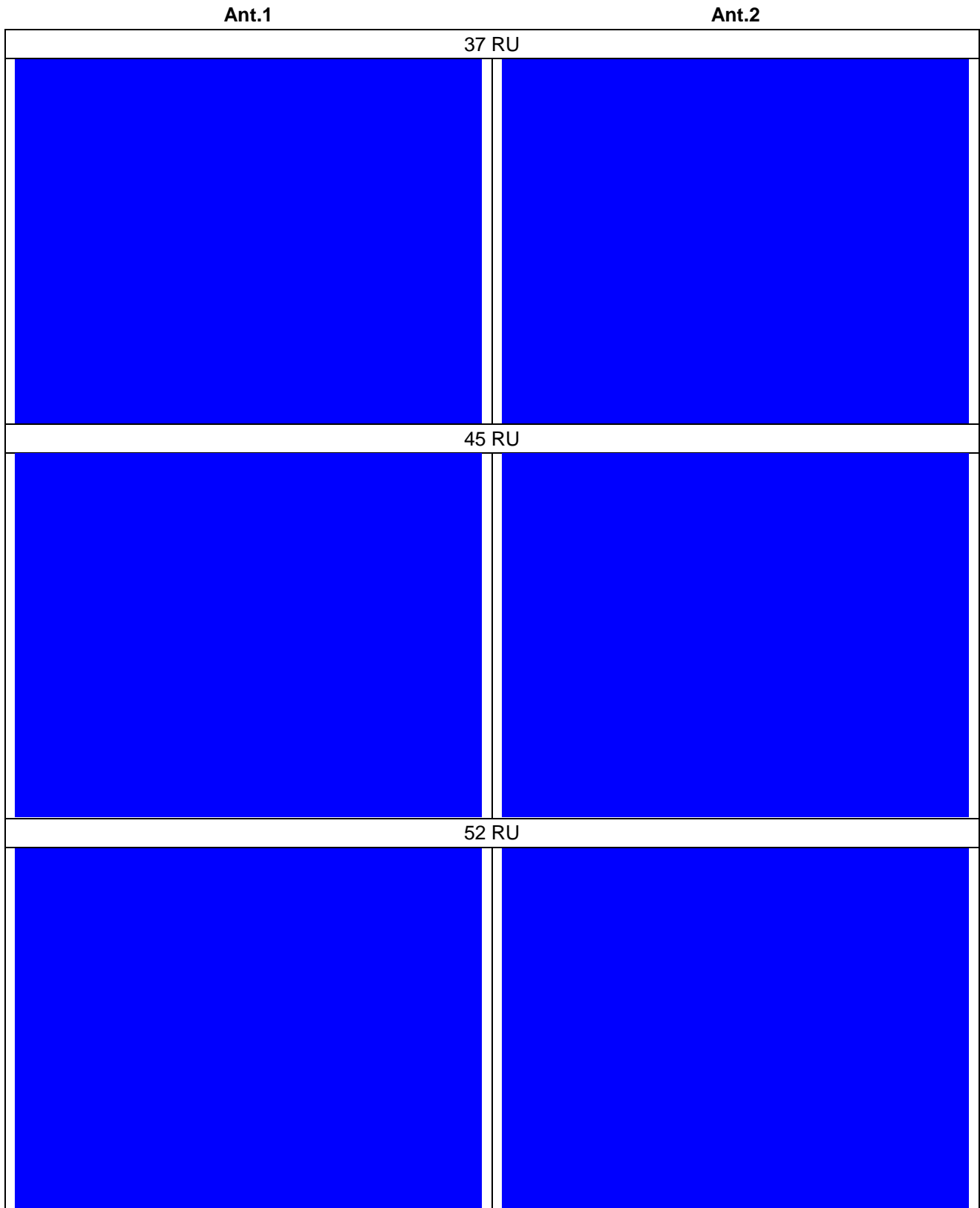


- SISO

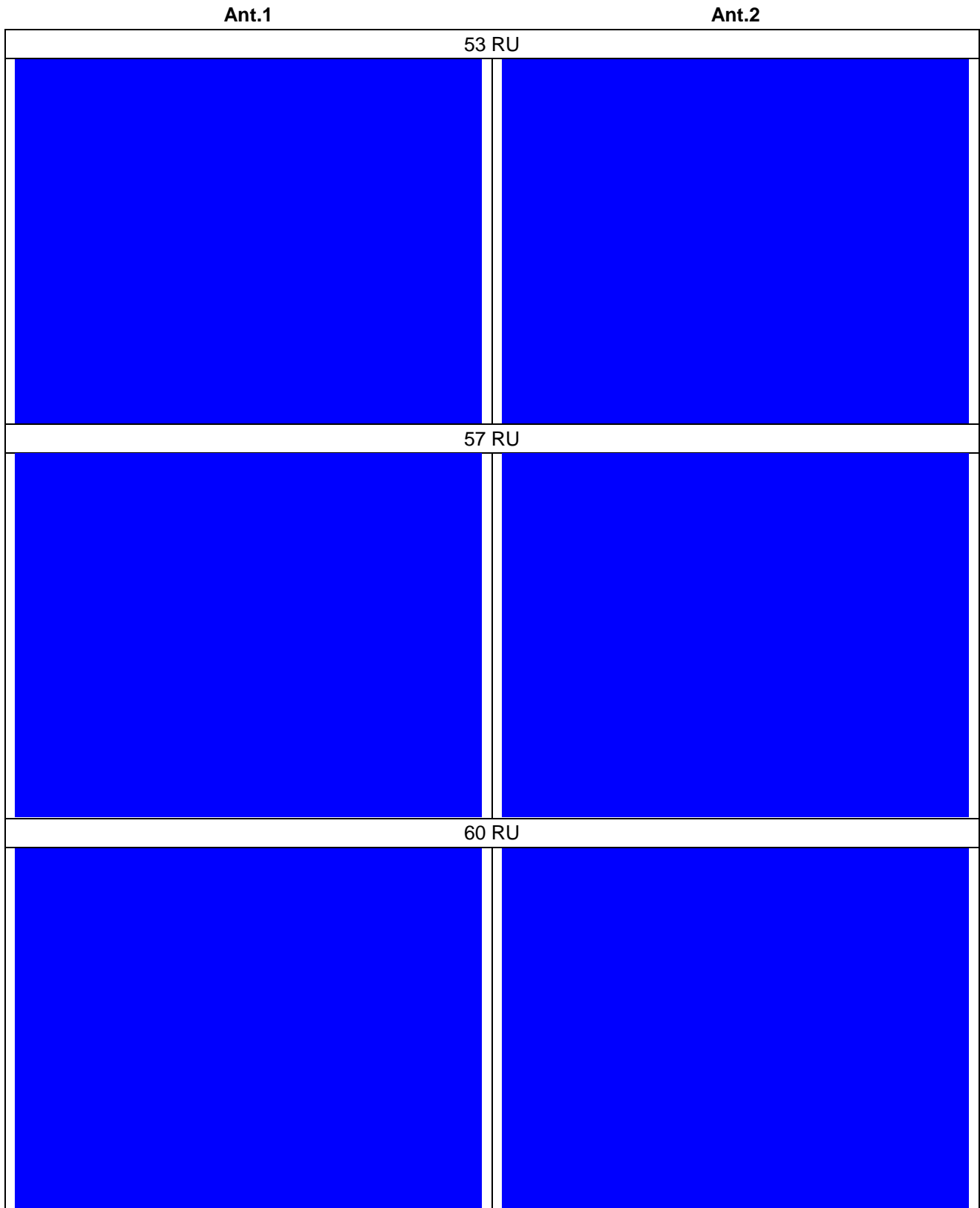
802.11ax_HE80 Band 1_Middle channel 26T



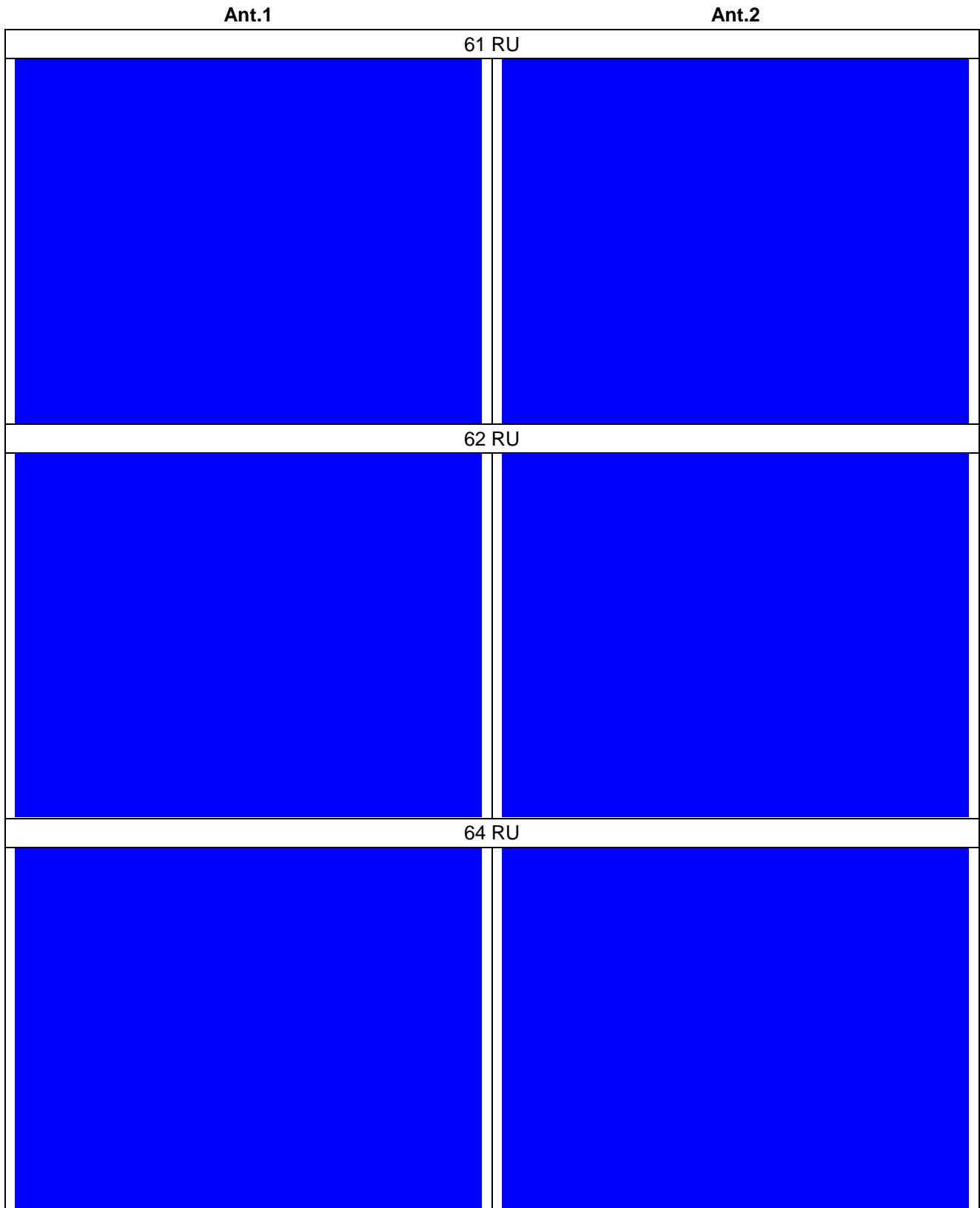
802.11ax_HE80 Band 1_Middle channel 52T



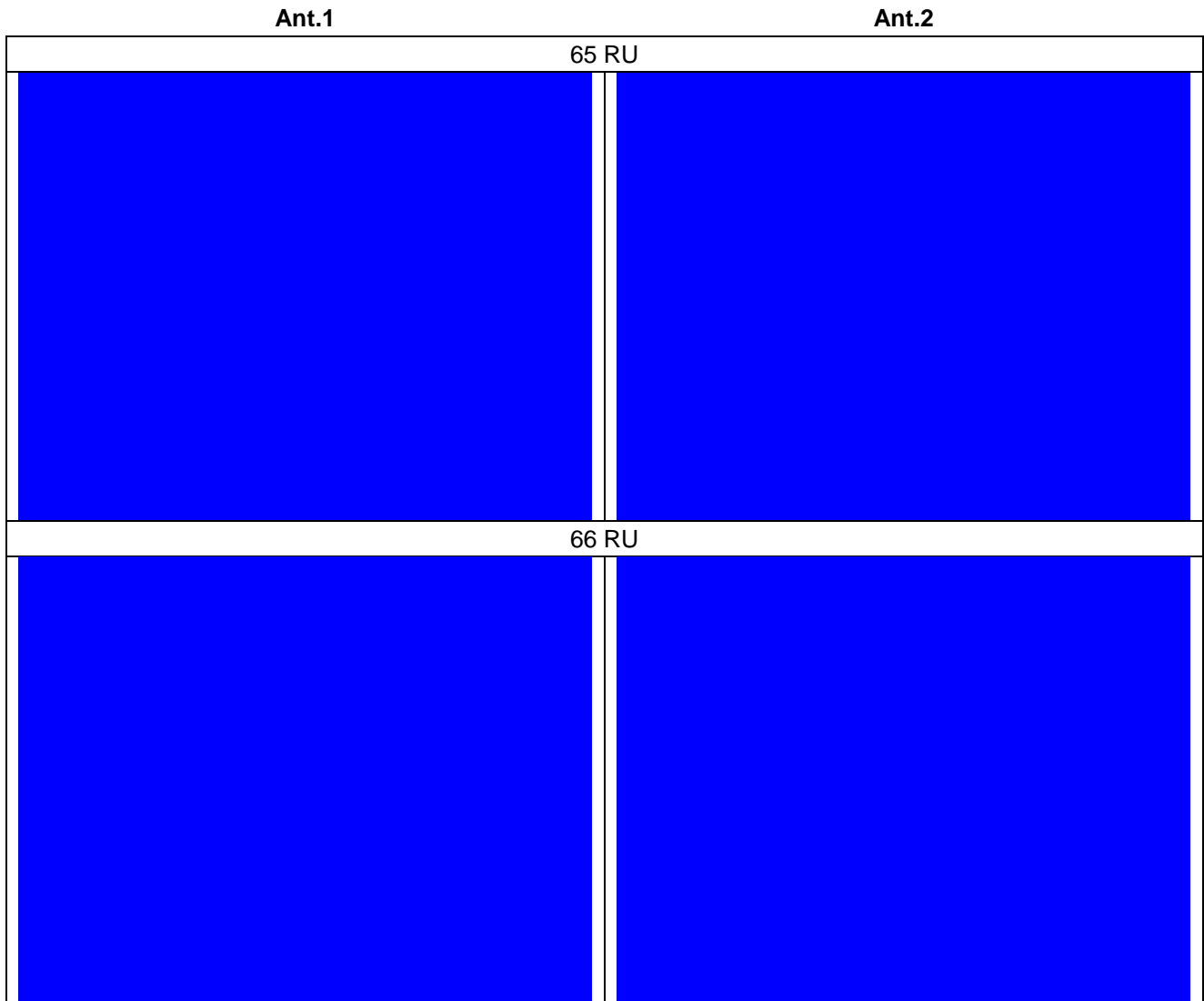
802.11ax_HE80 Band 1_Middle channel 106T



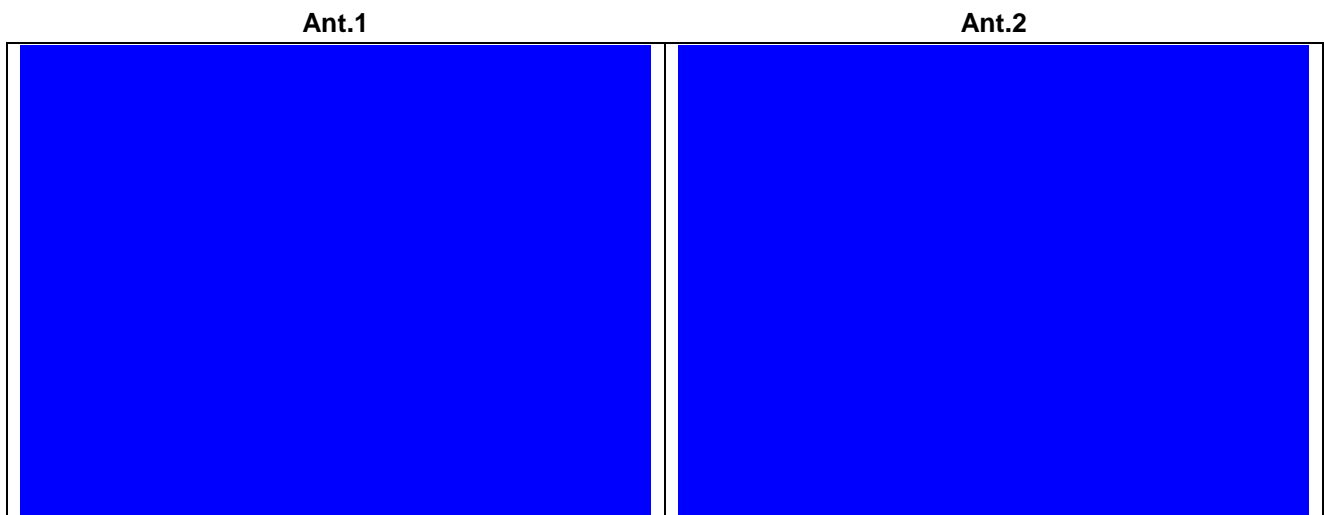
802.11ax_HE80 Band 1_Middle channel 242T



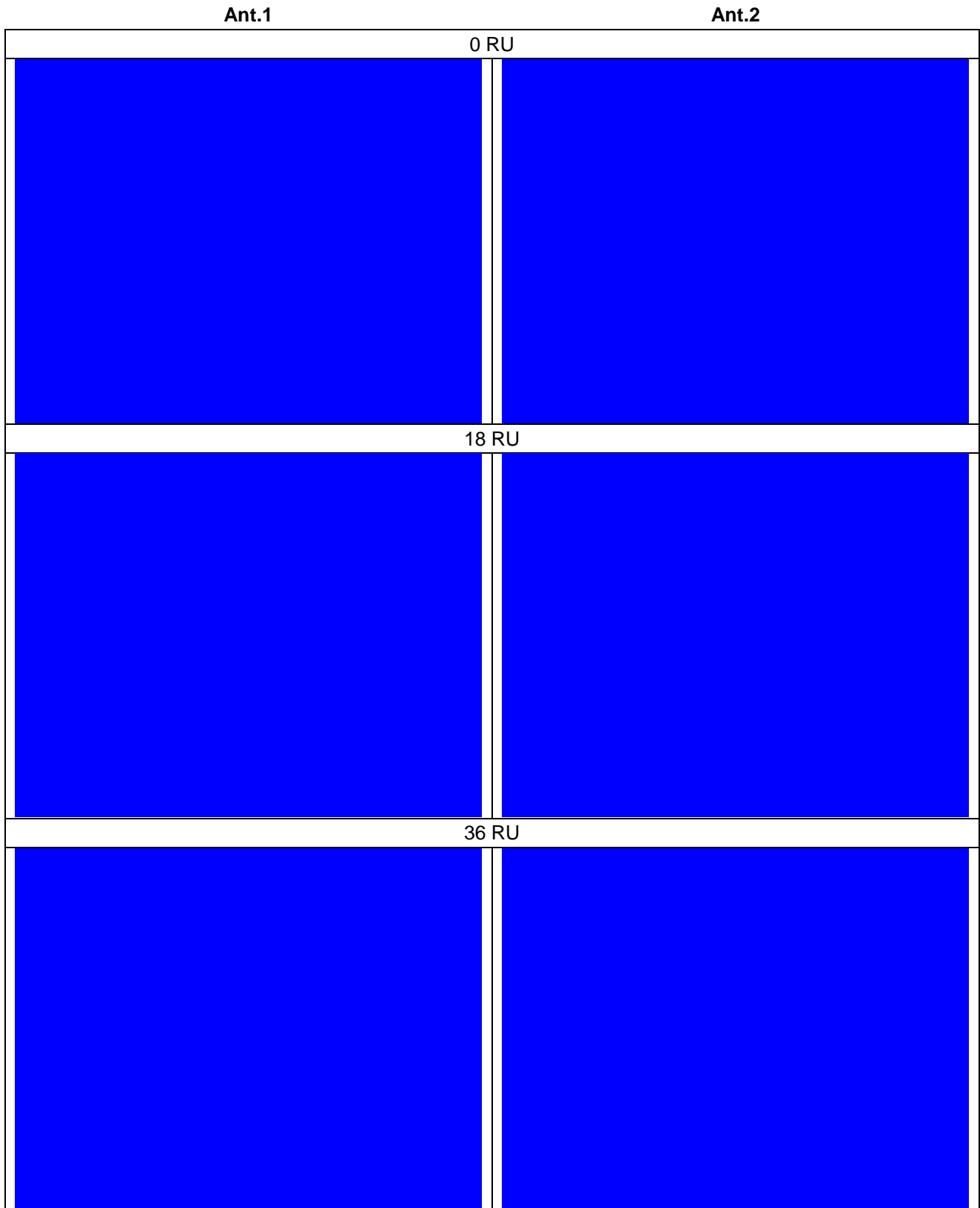
802.11ax_HE80 Band 1_Middle channel_242T



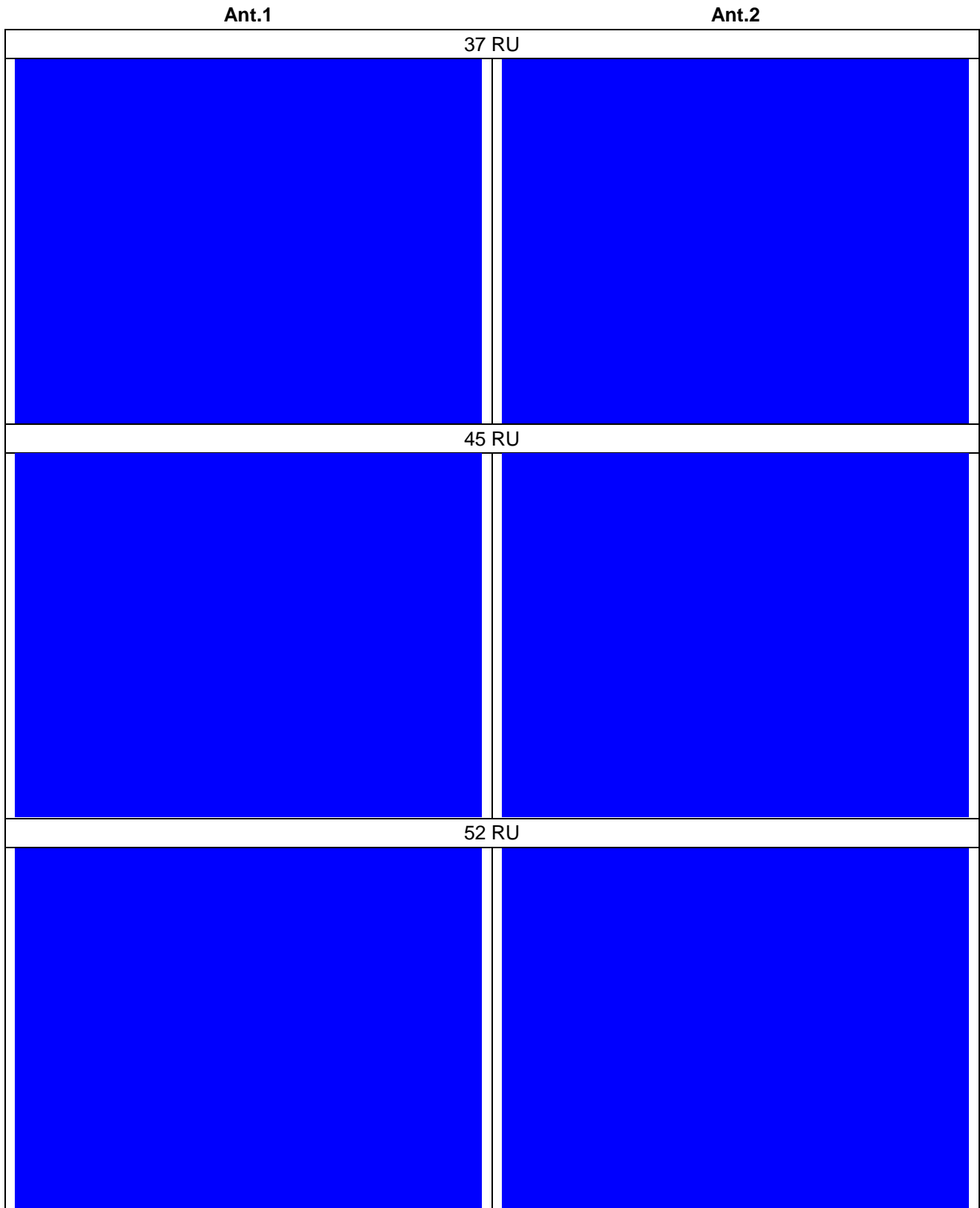
802.11ax_HE80 Band 1_Middle channel_SU



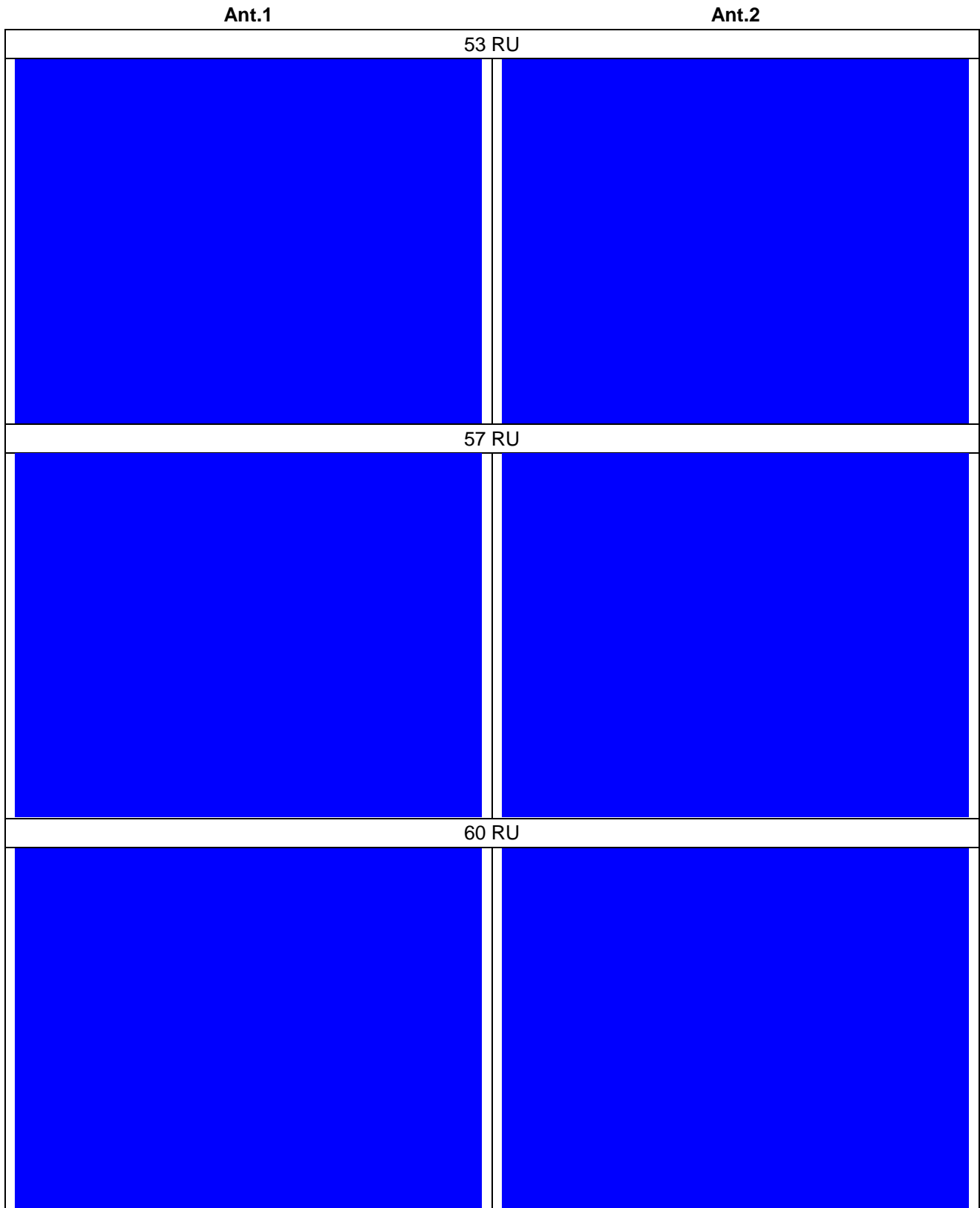
802.11ax_HE80 Band 2A_Middle channel 26T



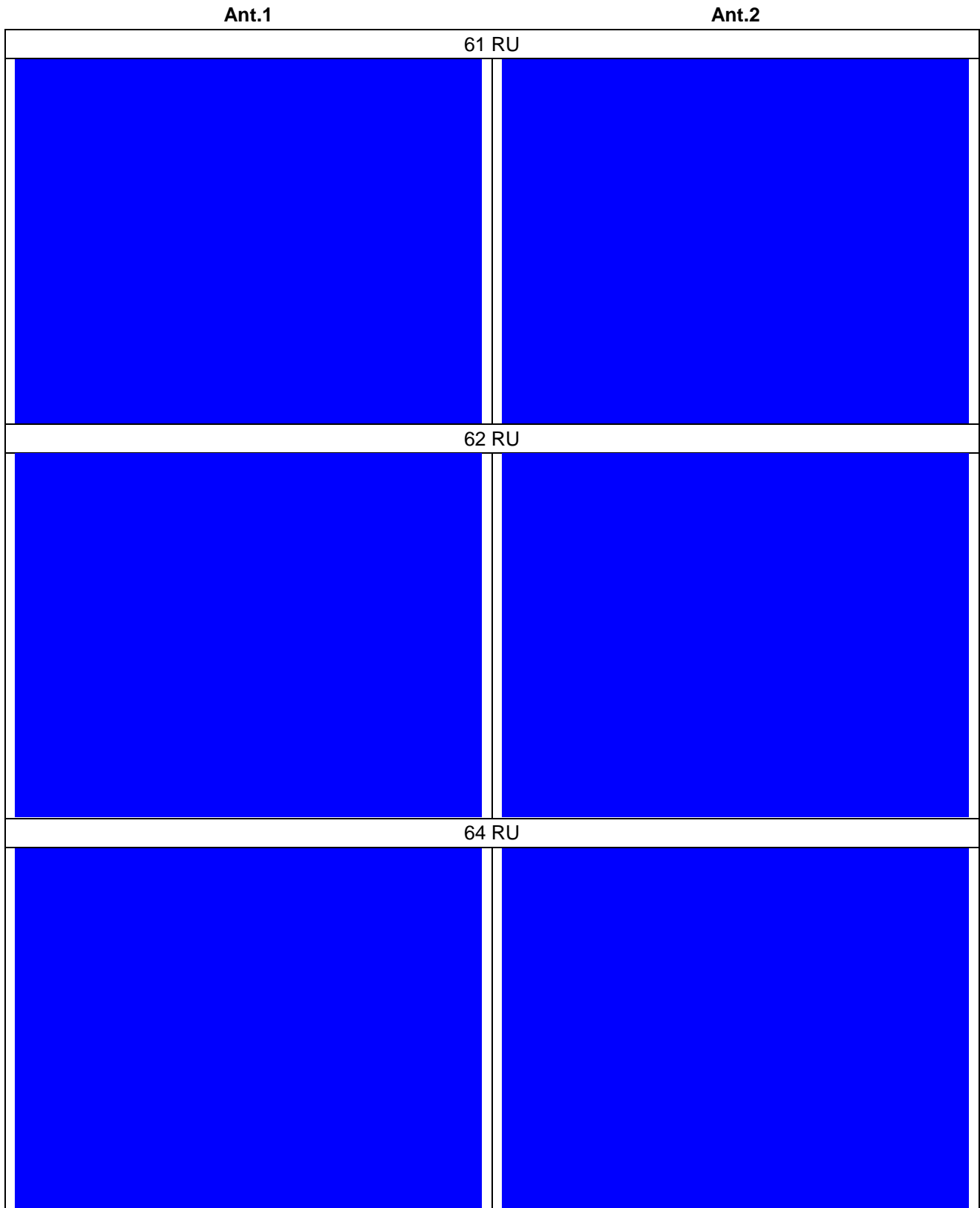
802.11ax_HE80 Band 2A_Middle channel 52T



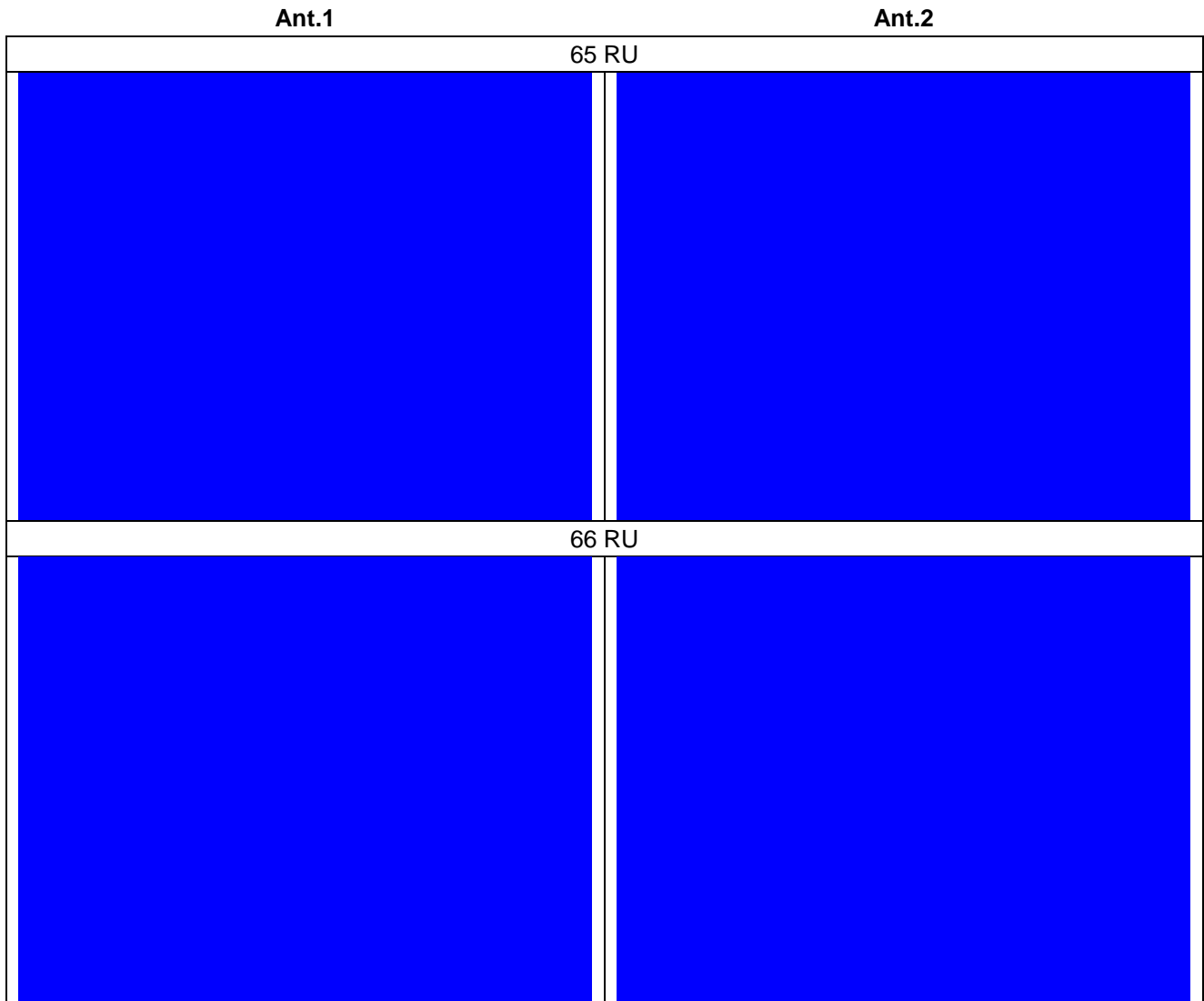
802.11ax_HE80 Band 2A_Middle channel 106T



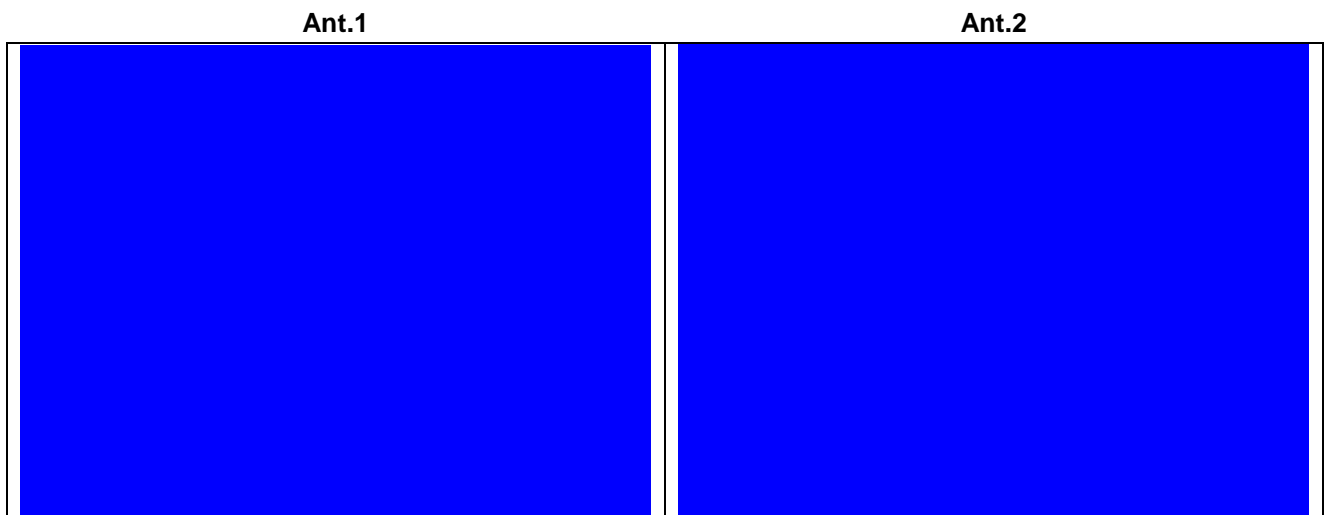
802.11ax_HE80 Band 2A_Middle channel 242T



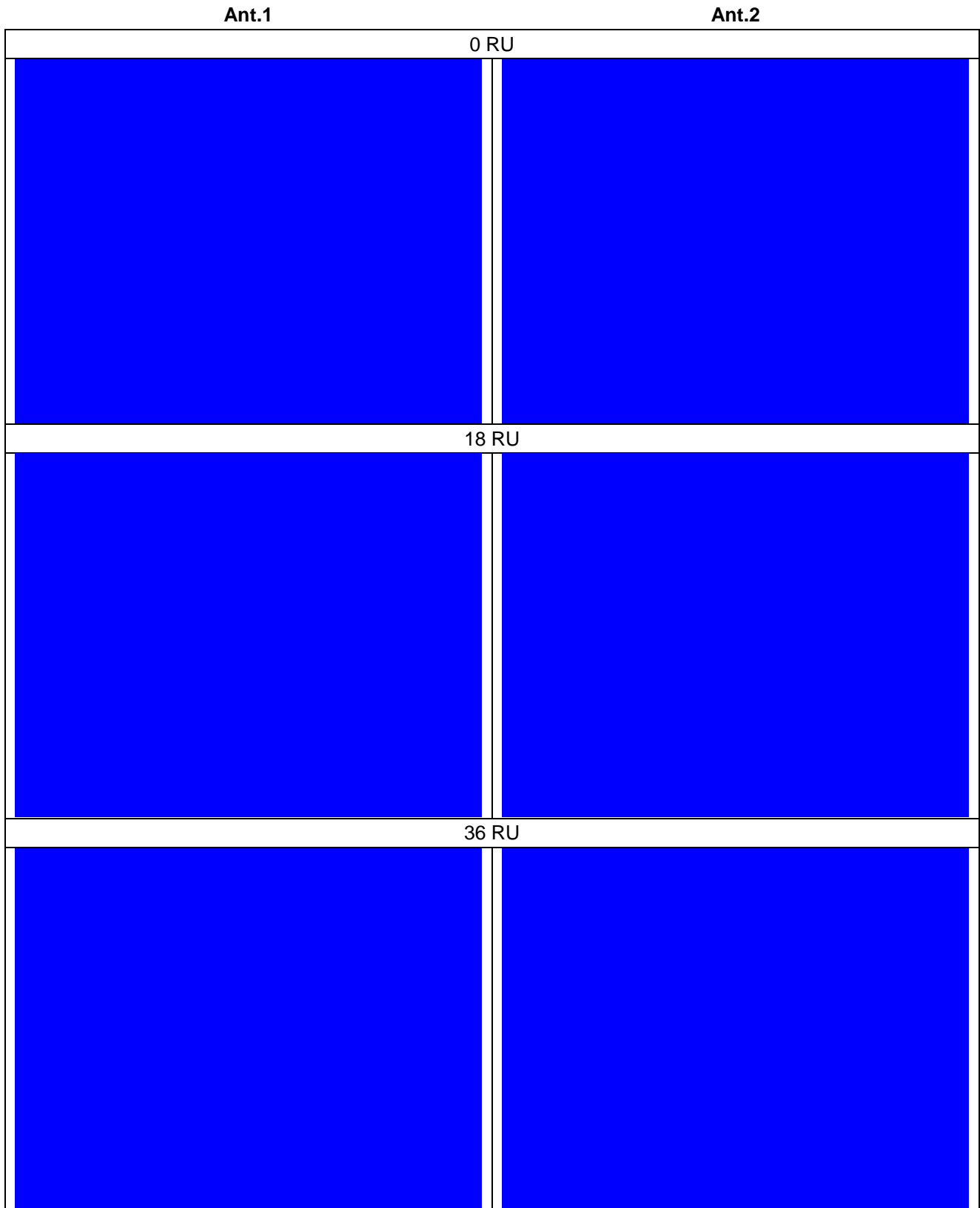
802.11ax_HE80 Band 2A_Middle channel_242T



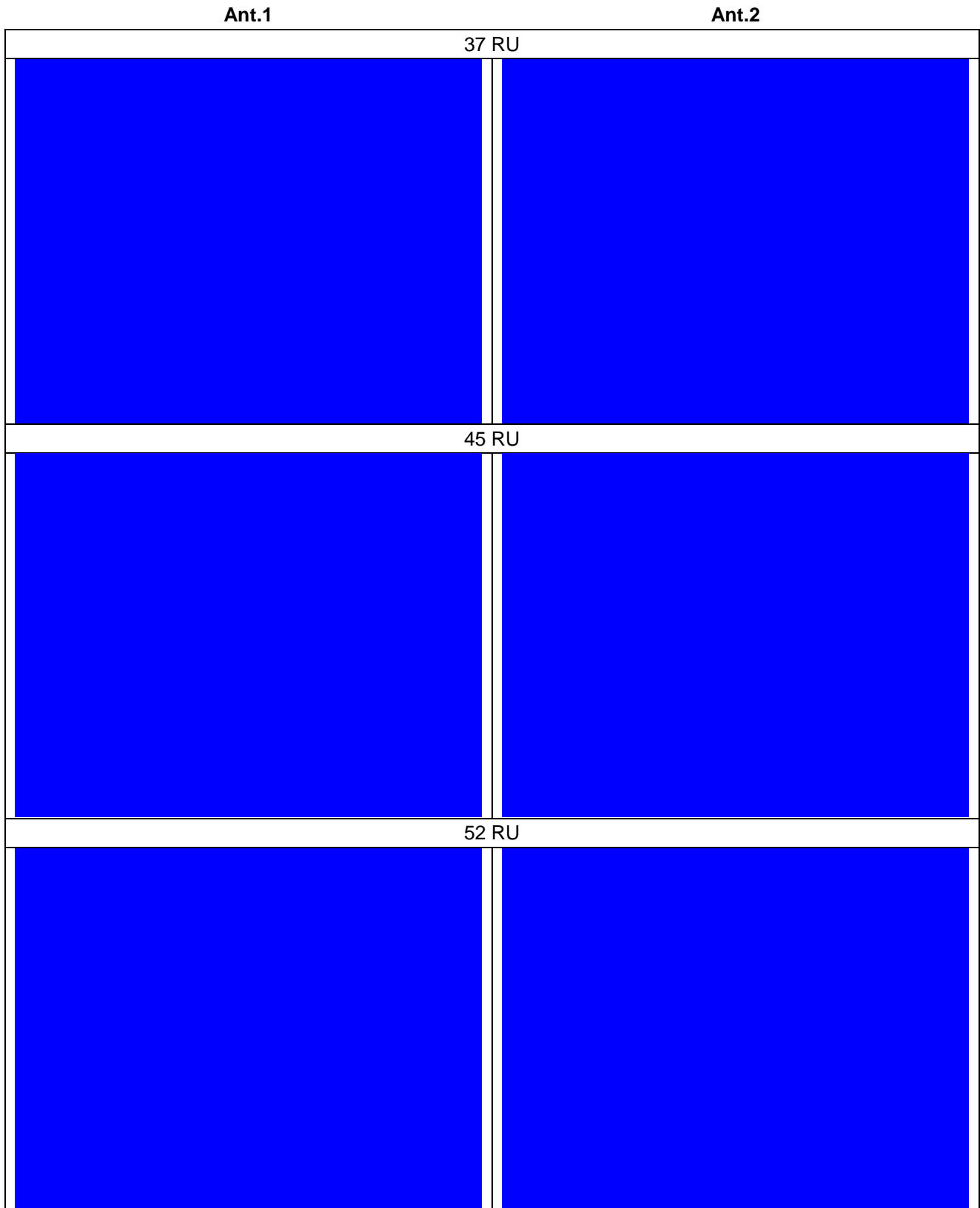
802.11ax_HE80 Band 2A_Middle channel_SU



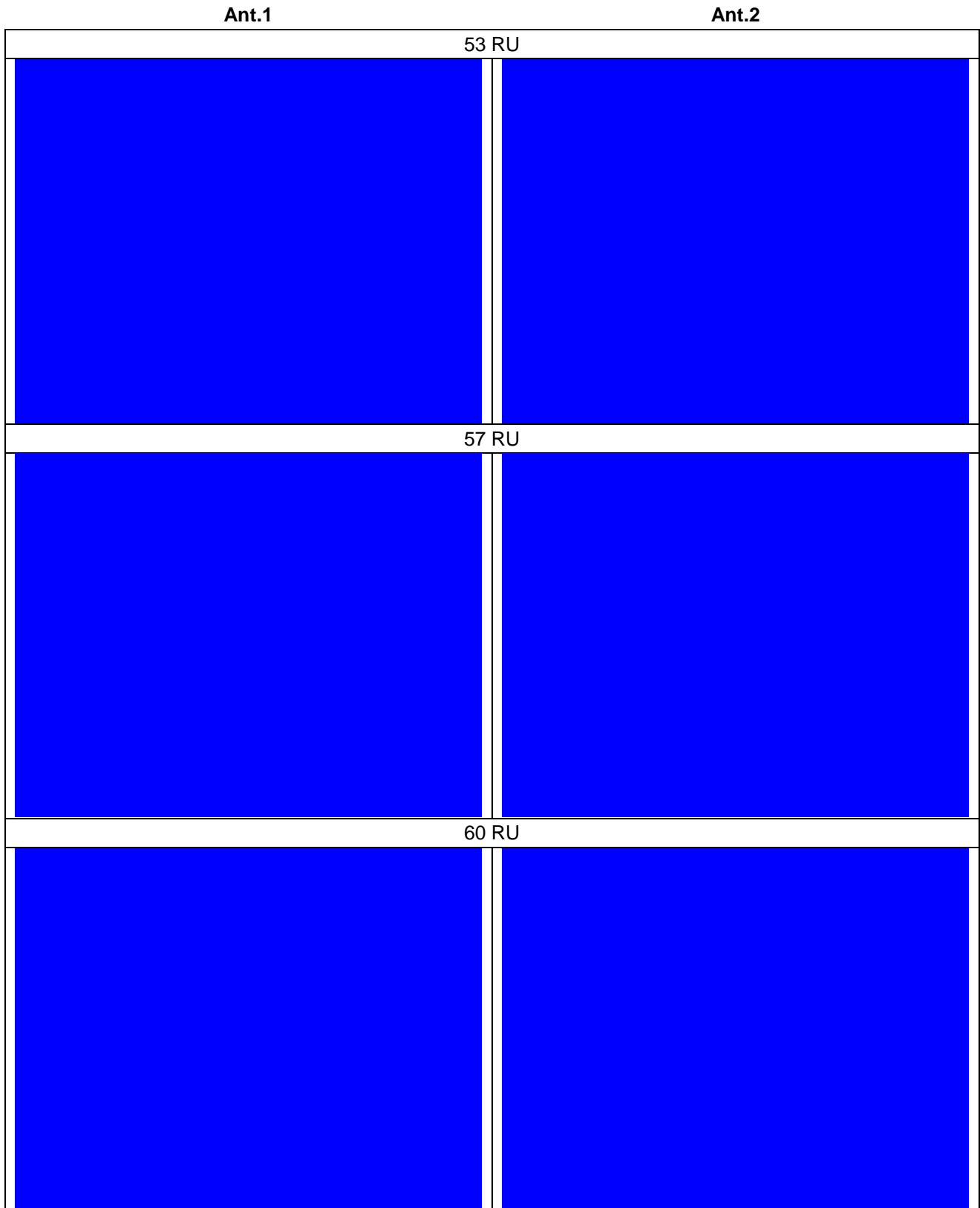
802.11ax_HE80 Band 2C_Low channel 26T



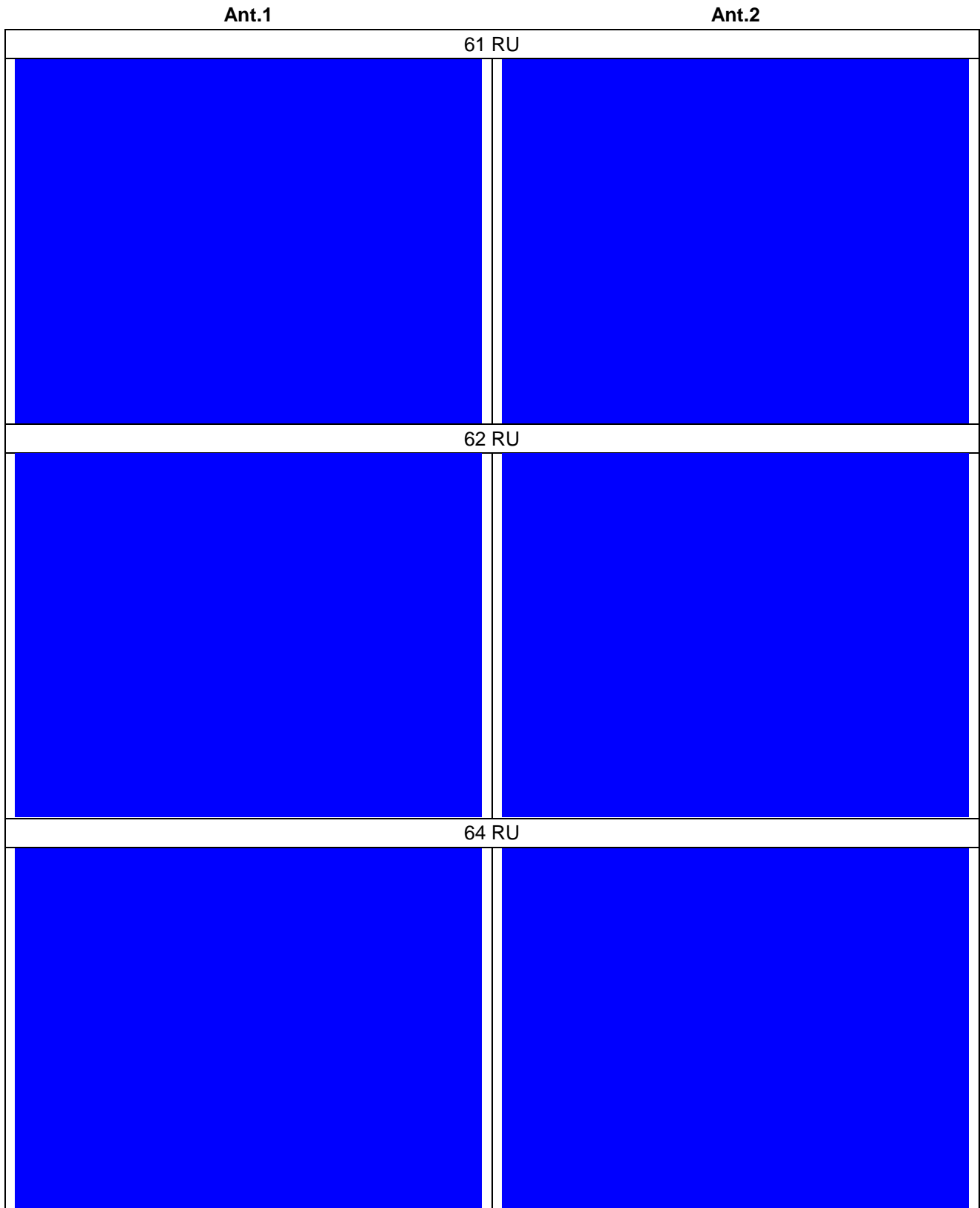
802.11ax_HE80 Band 2C_Low channel 52T



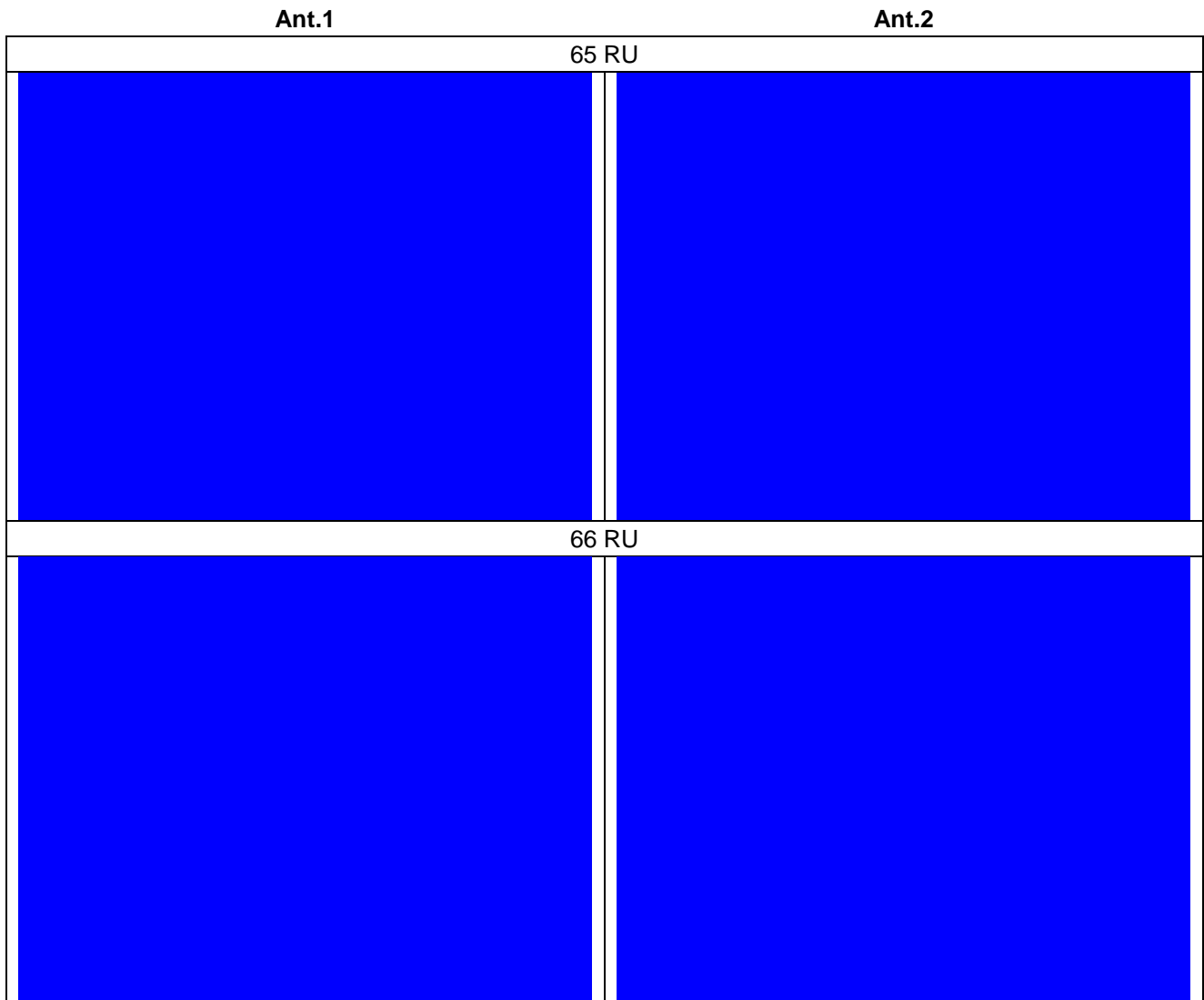
802.11ax_HE80 Band 2C_Low channel 106T



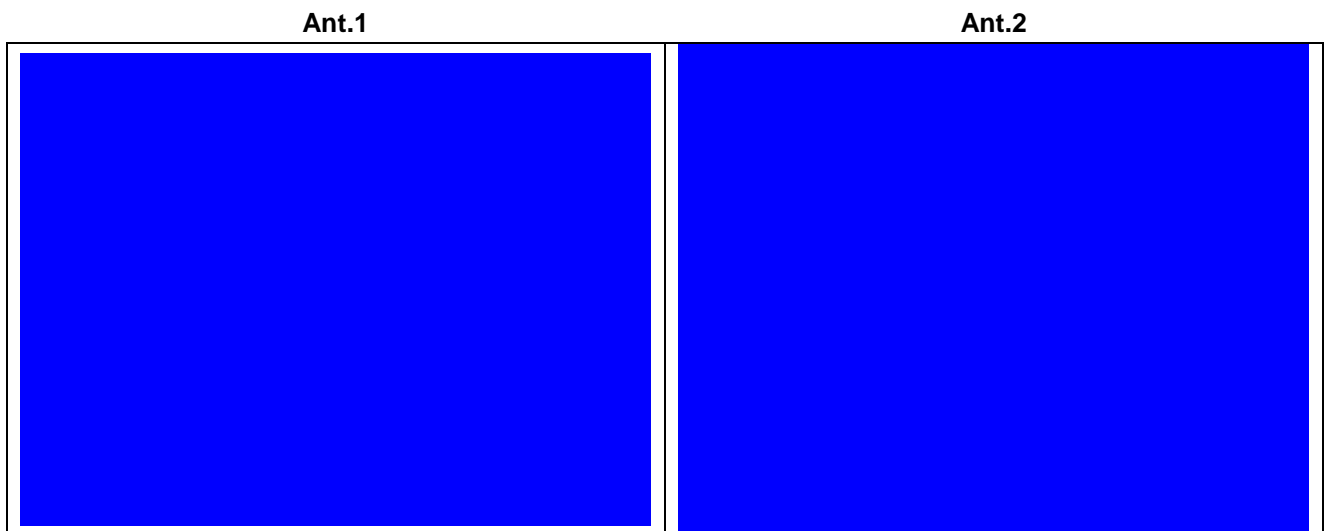
802.11ax_HE80 Band 2C_Low channel 242T



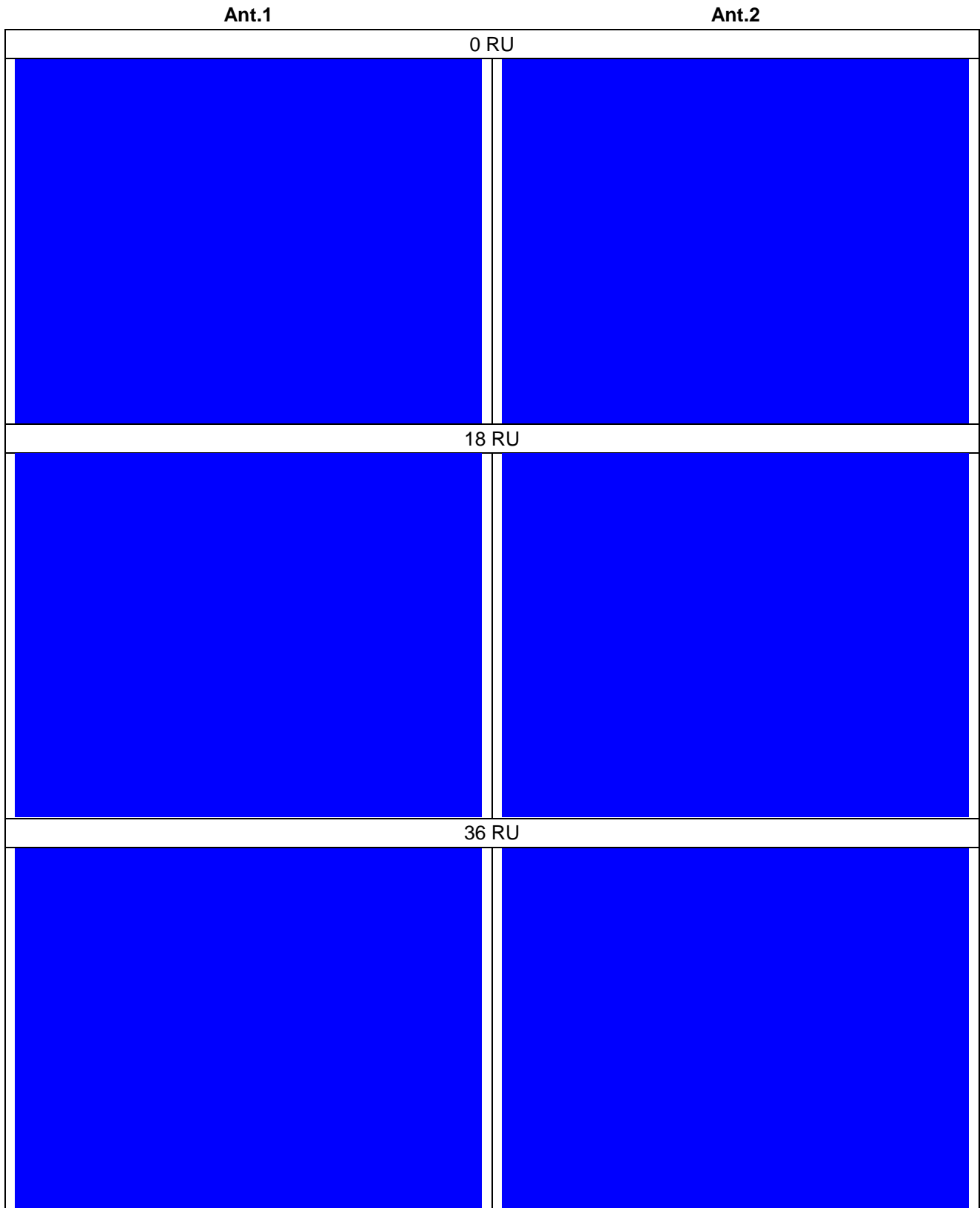
802.11ax_HE80 Band 2C_Low channel_242T



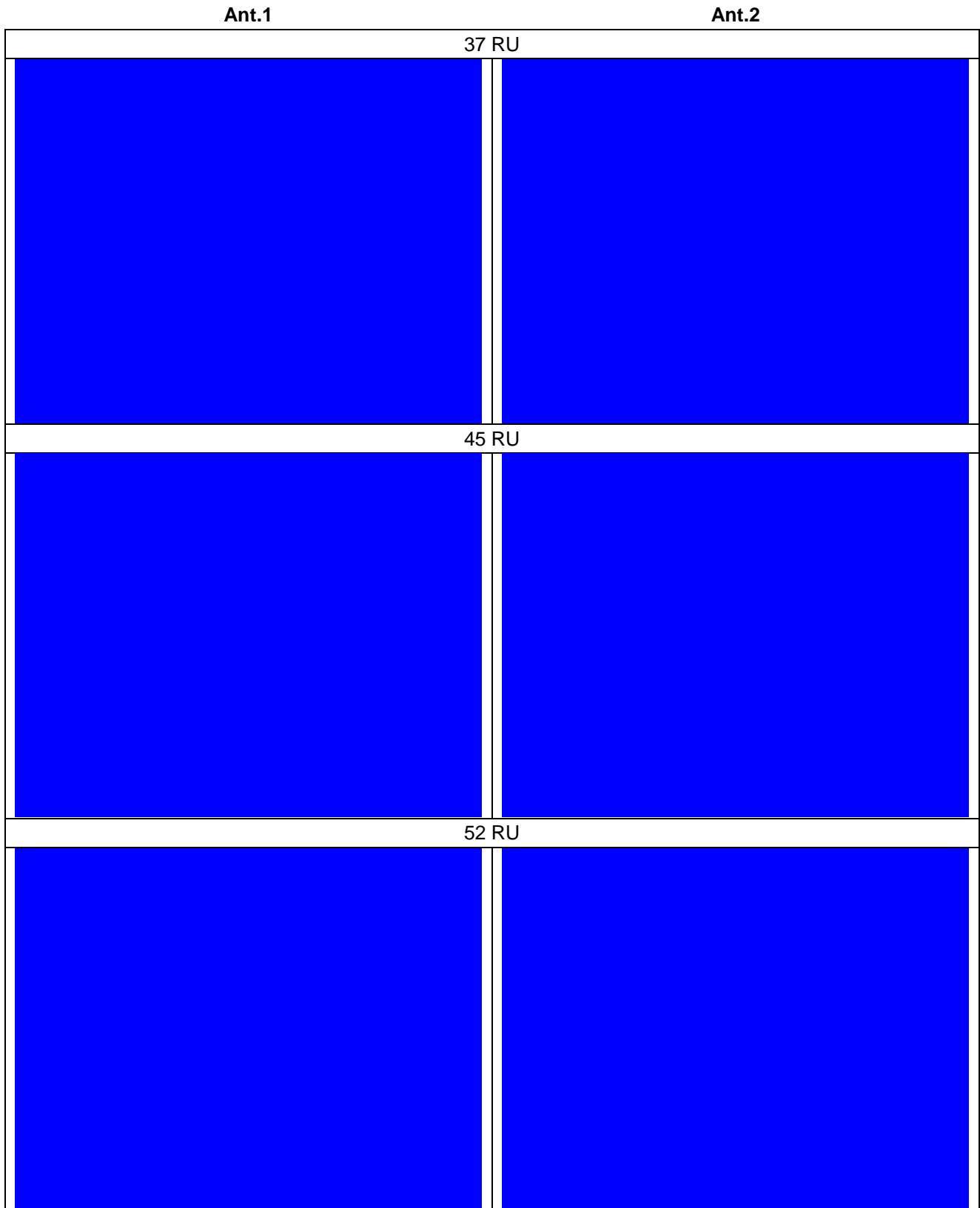
802.11ax_HE80 Band 2C_Low channel_SU



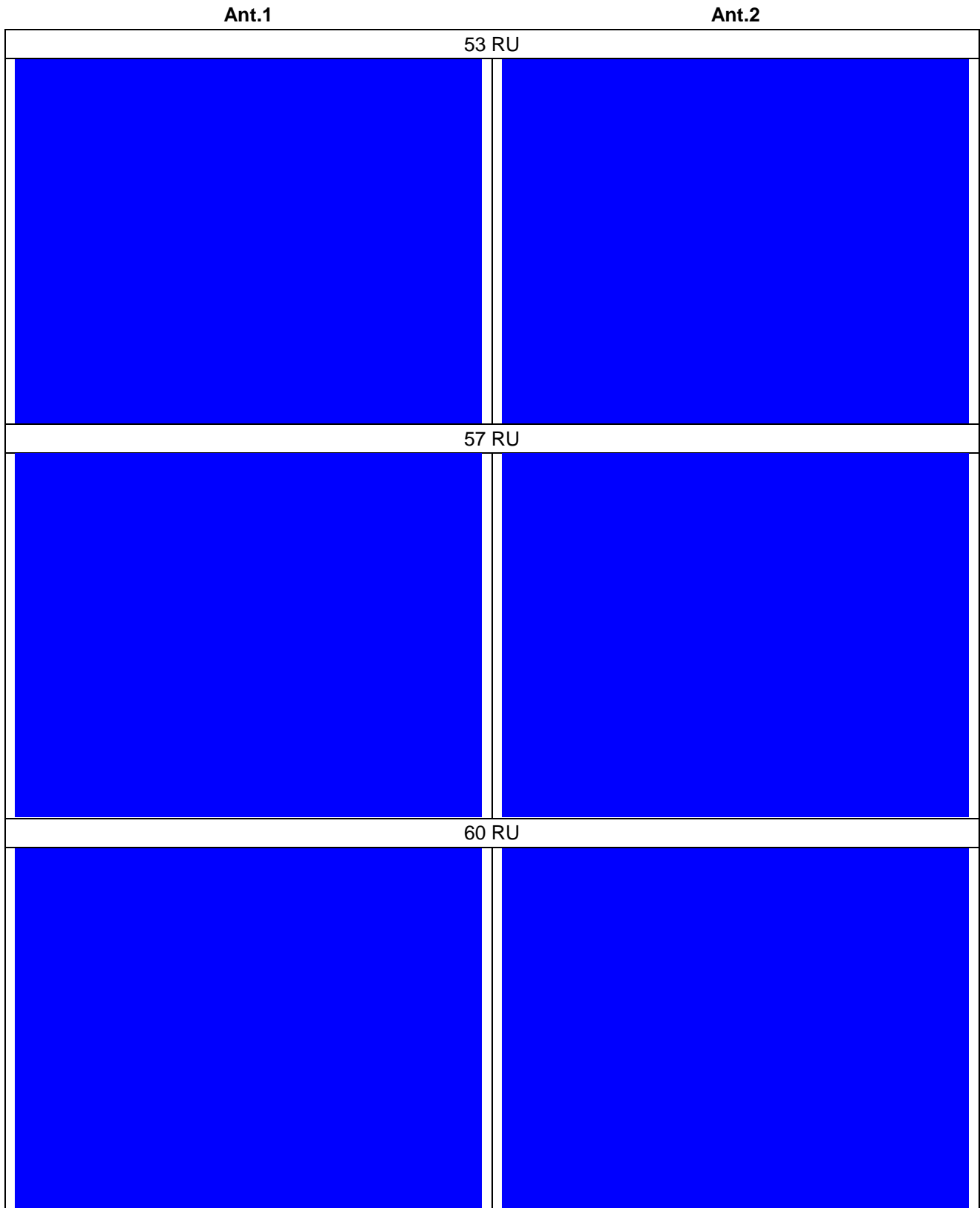
802.11ax_HE80 Band 2C_High channel 26T



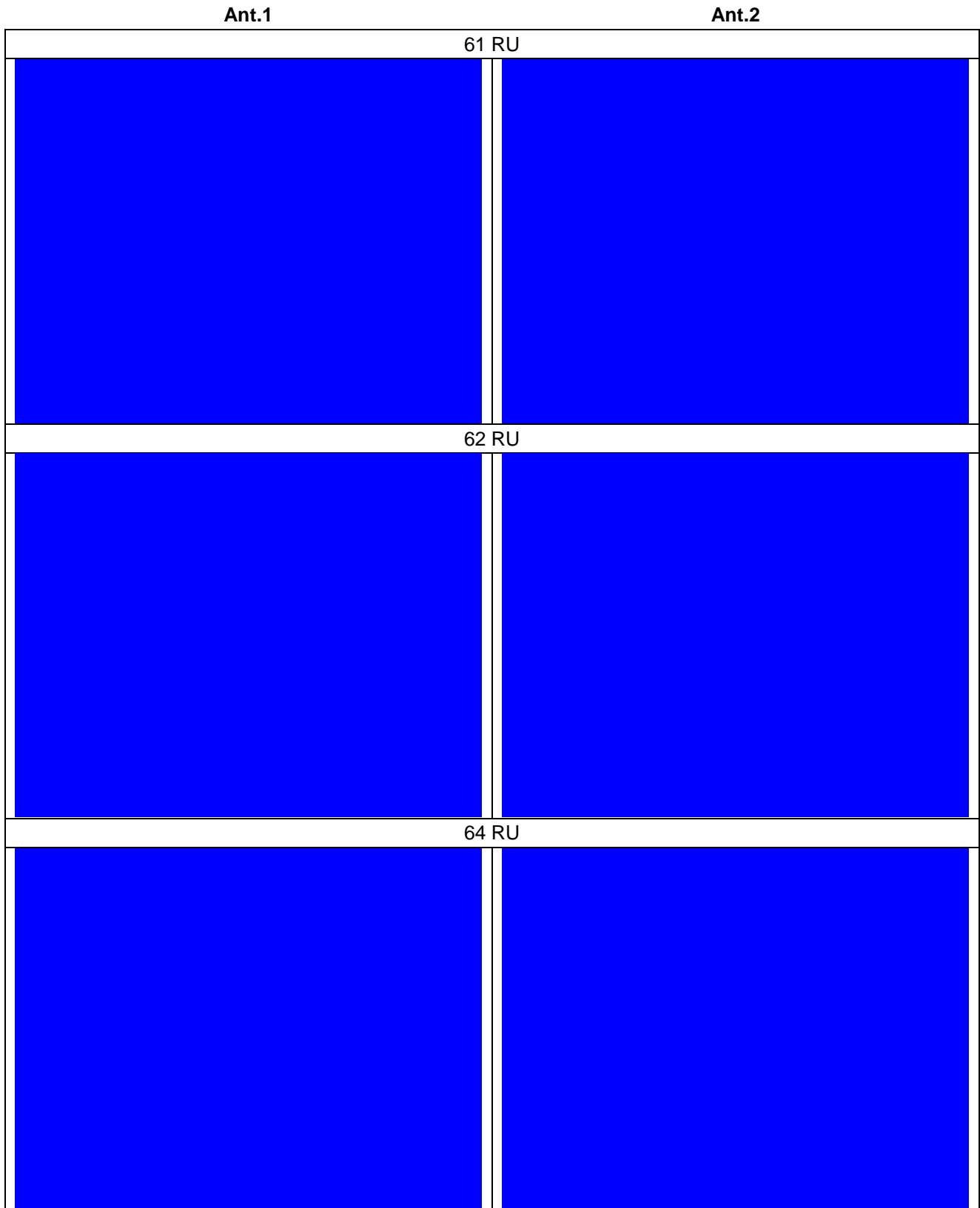
802.11ax_HE80 Band 2C_High channel 52T



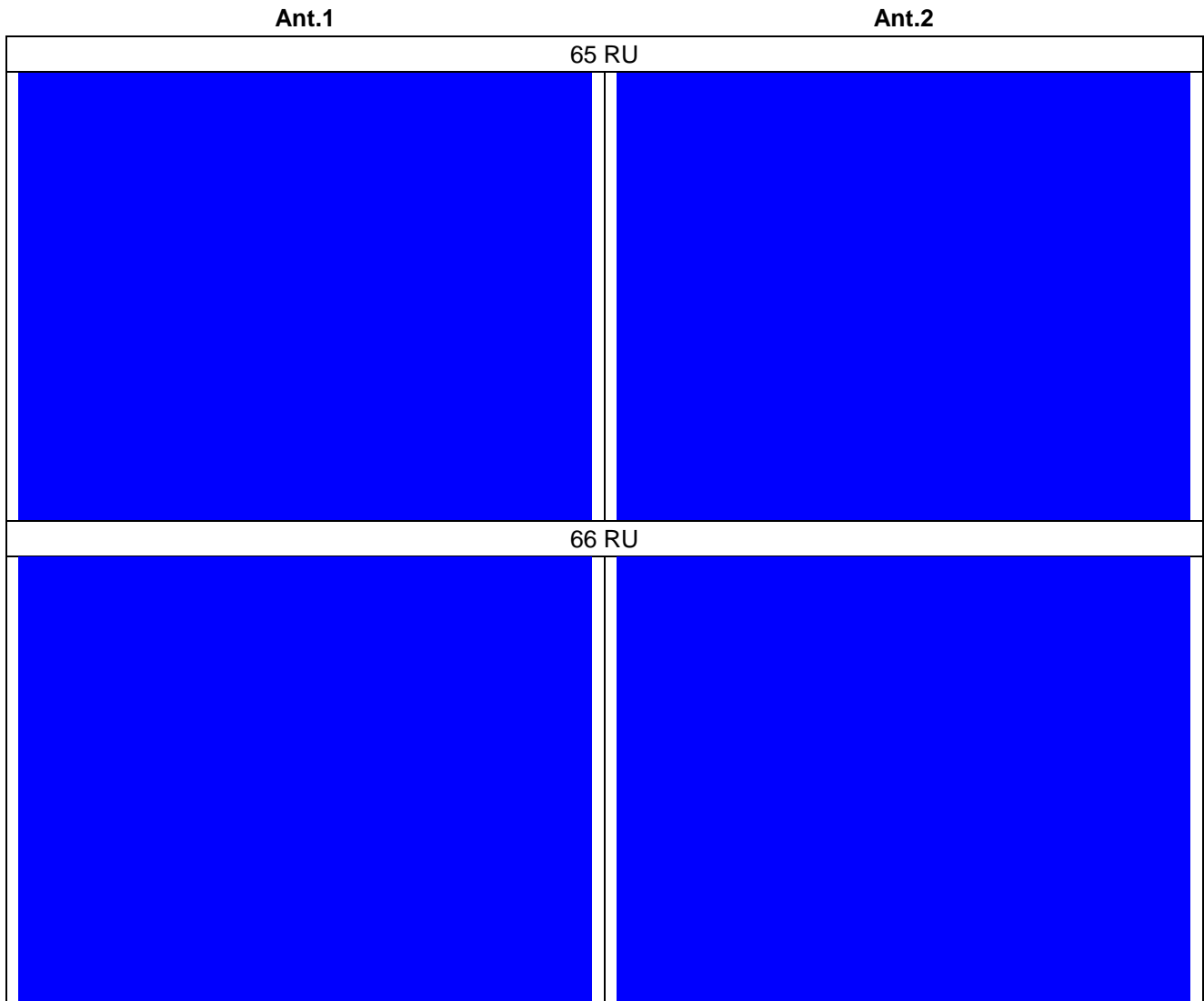
802.11ax_HE80 Band 2C_High channel 106T



802.11ax_HE80 Band 2C_High channel 242T



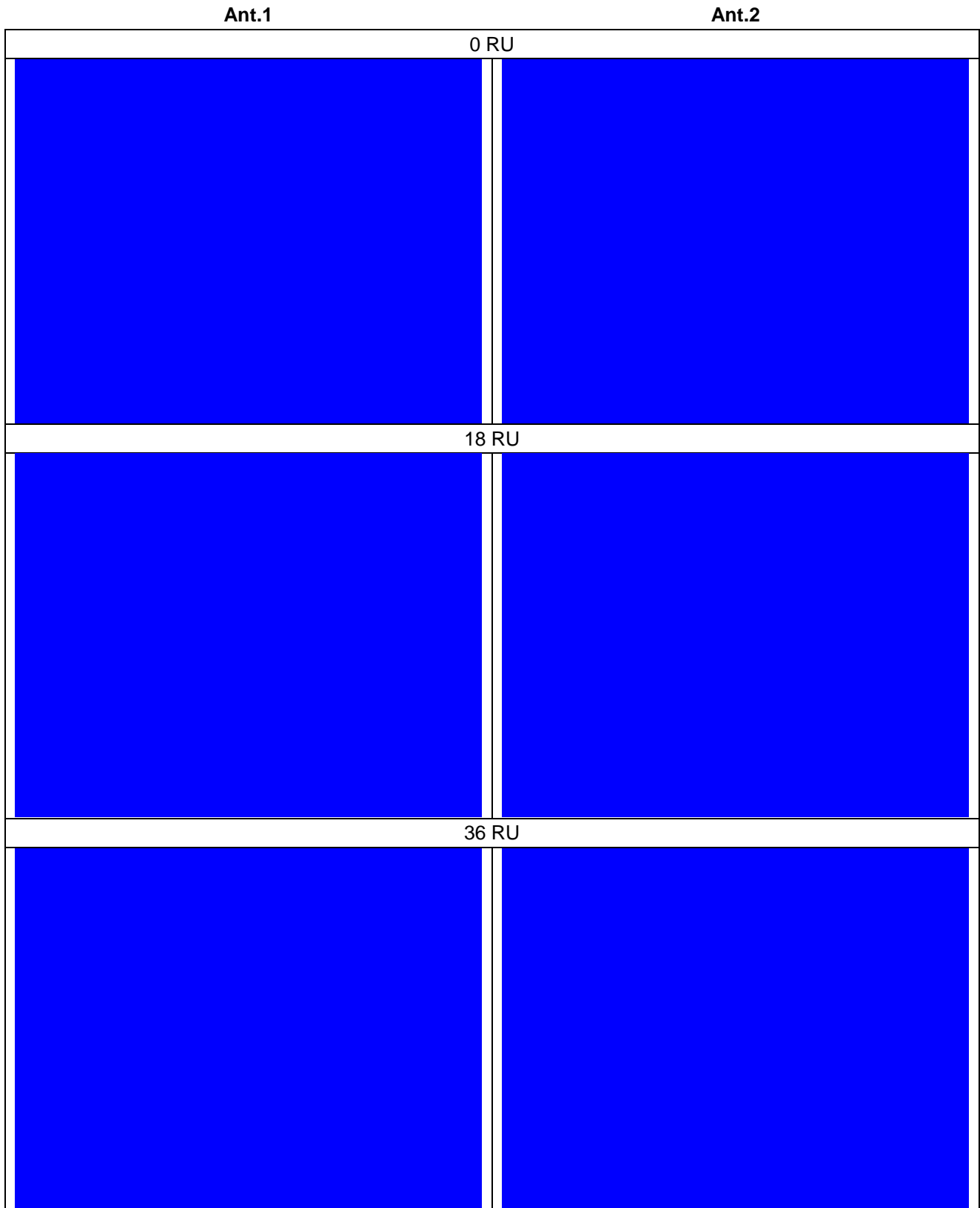
802.11ax_HE80 Band 2C_High channel_242T



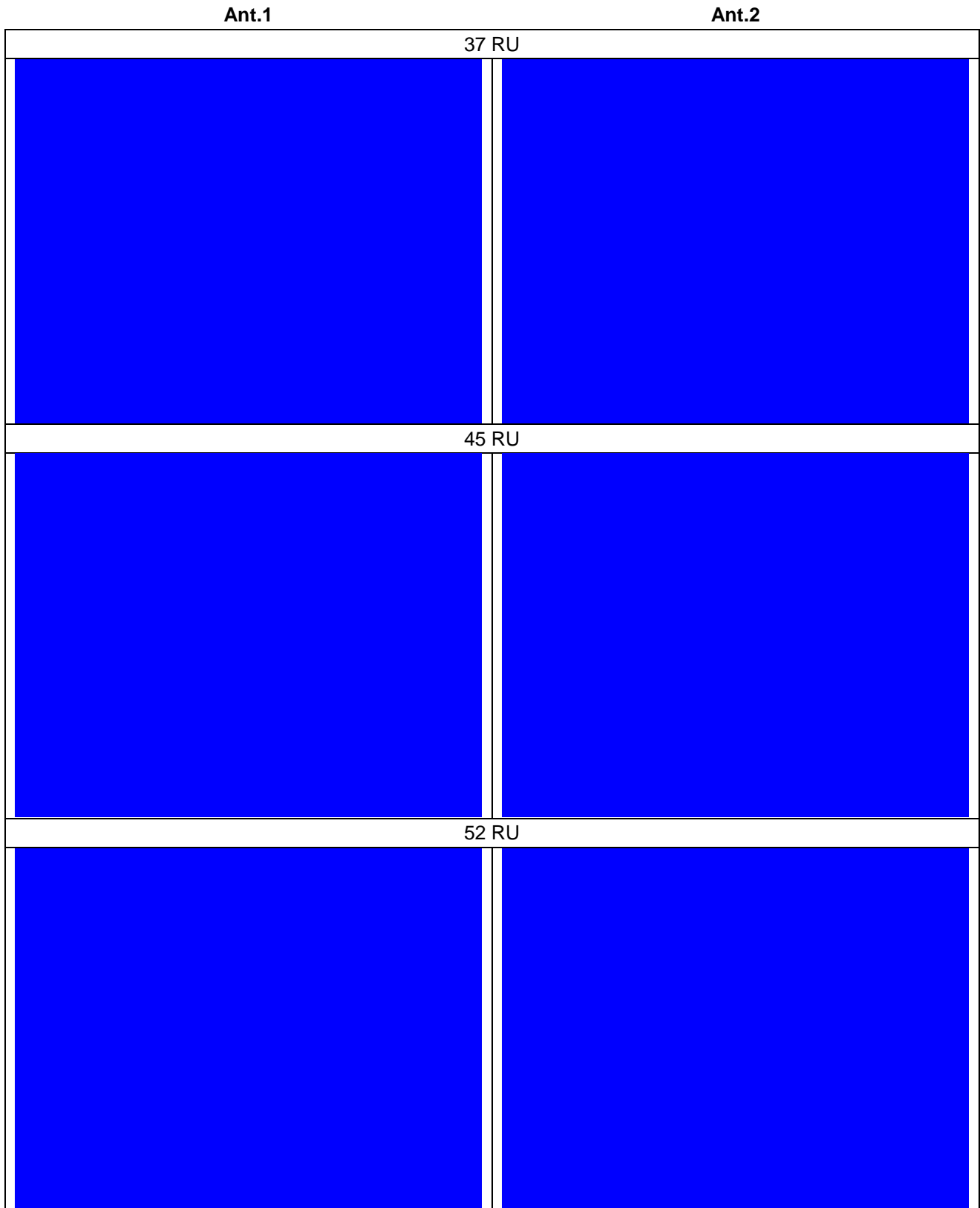
802.11ax_HE80 Band 2C_High channel_SU



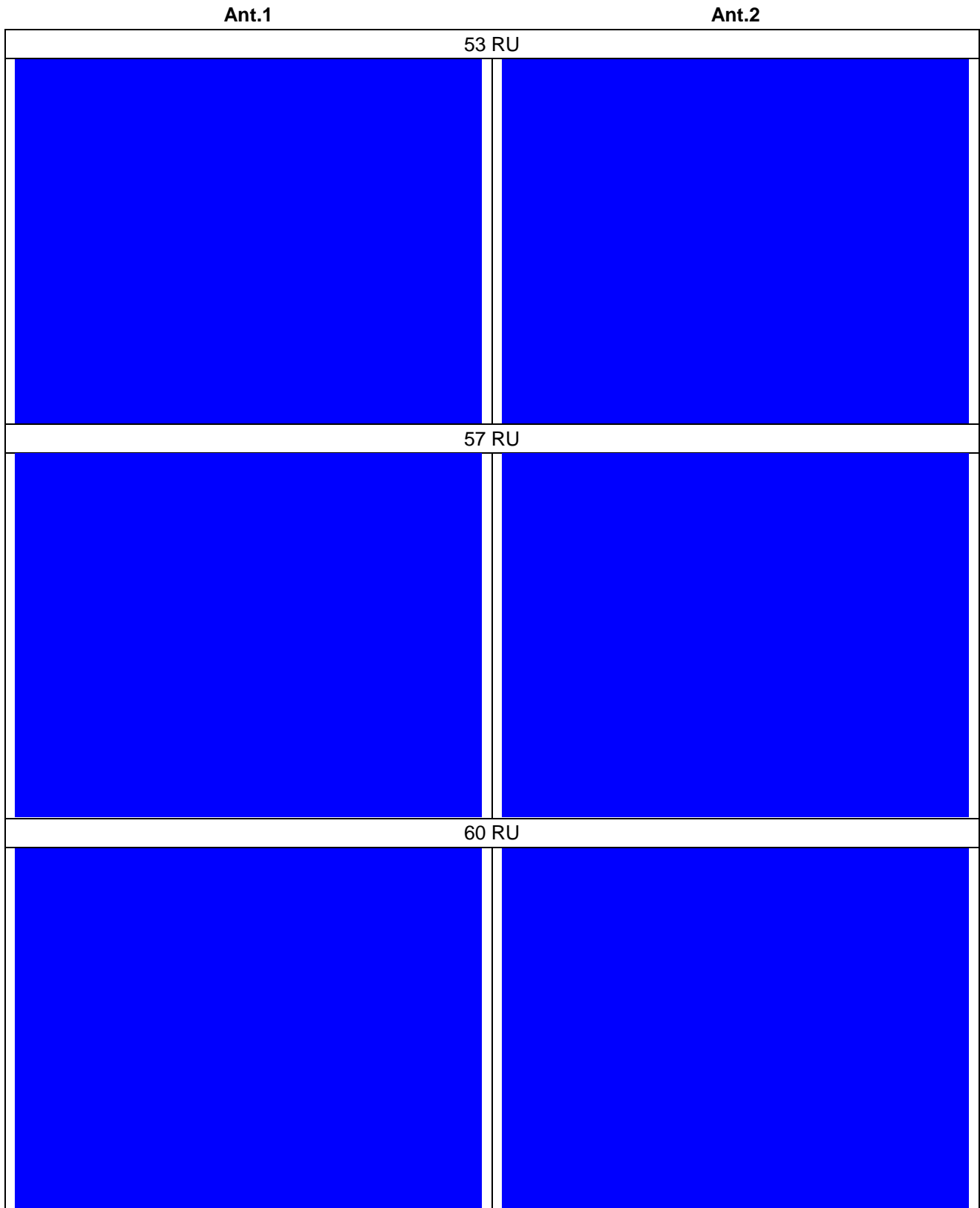
802.11ax_HE80 Band 3_Middle channel 26T



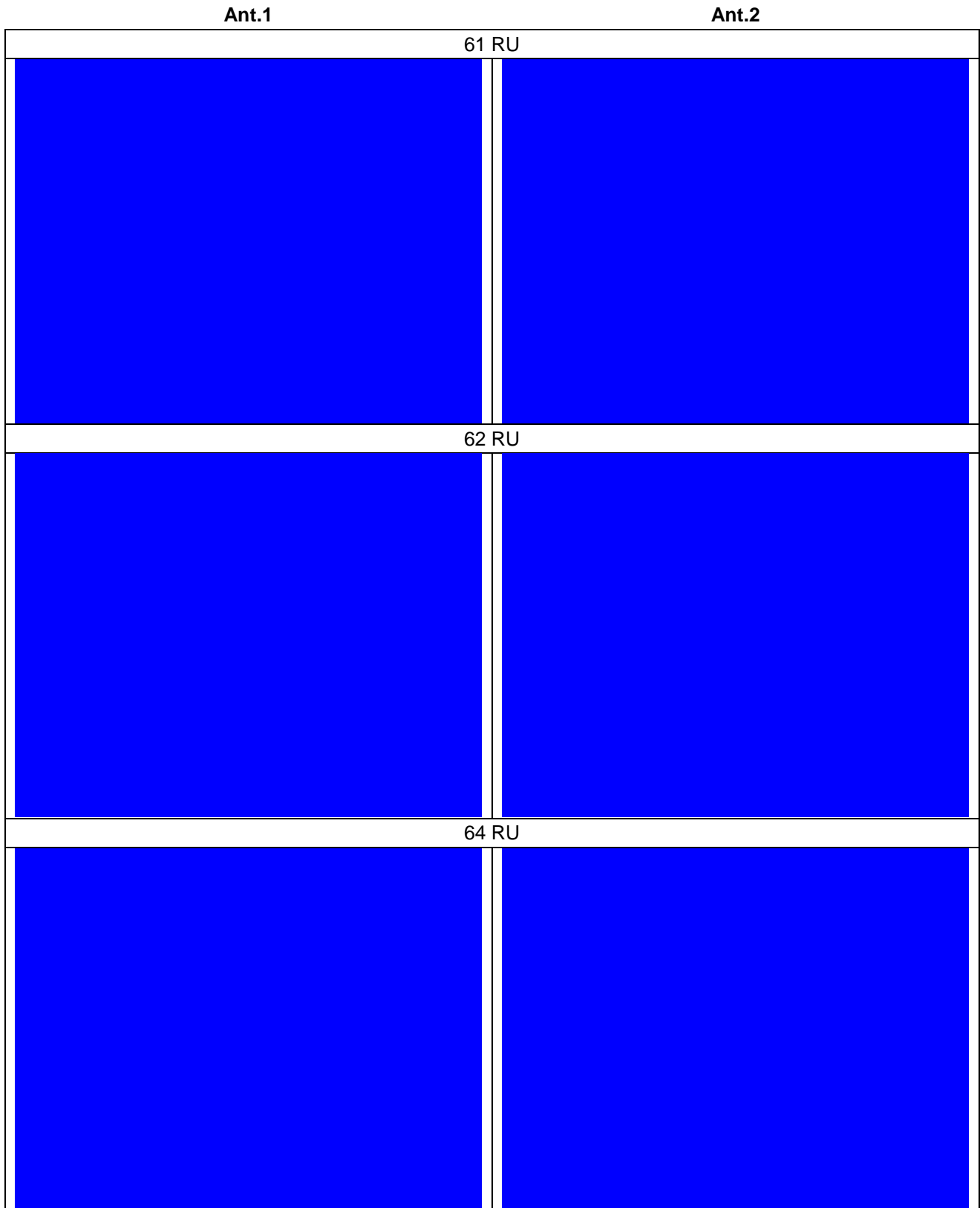
802.11ax_HE80 Band 3_Middle channel 52T



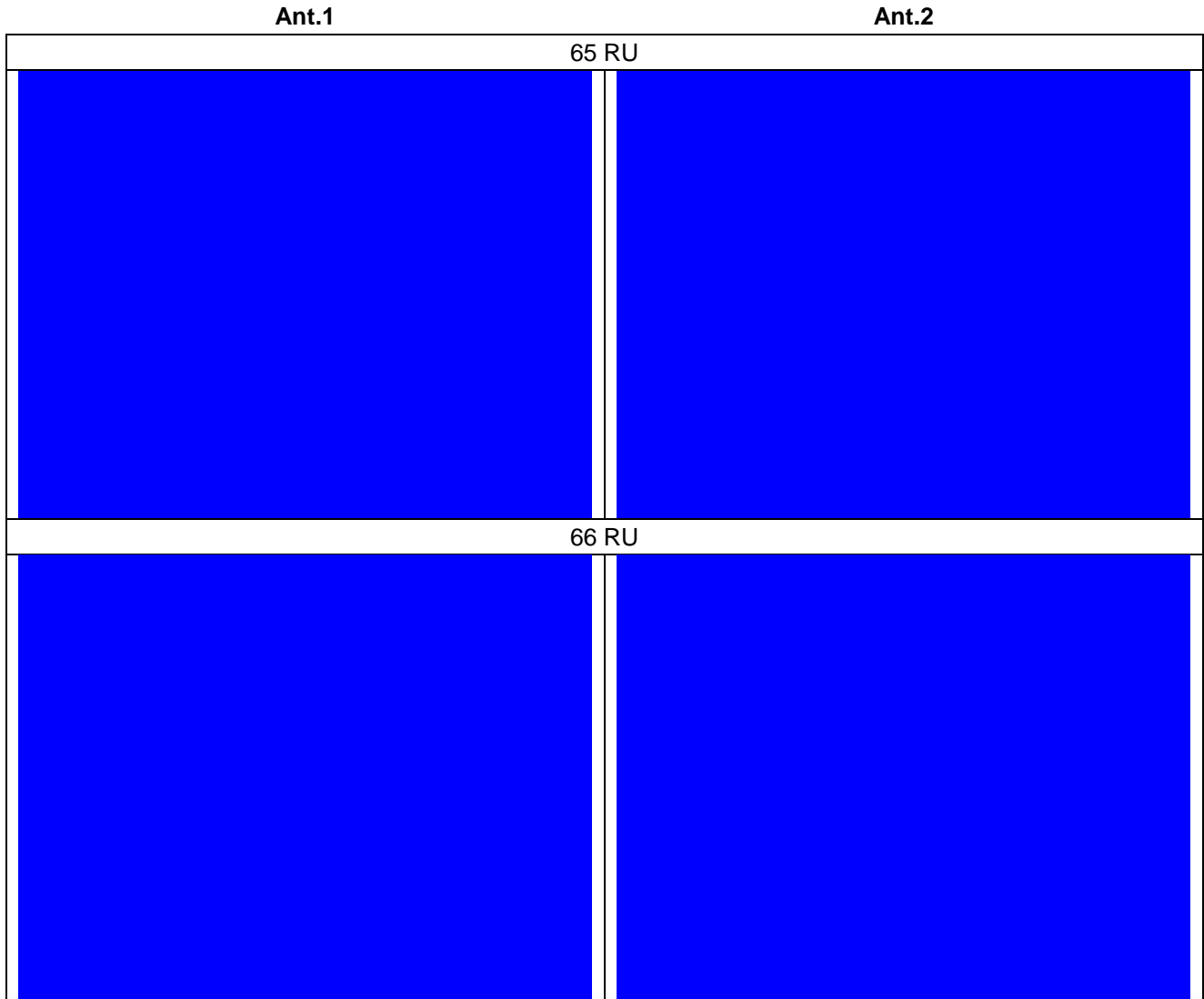
802.11ax_HE80 Band 3_Middle channel 106T



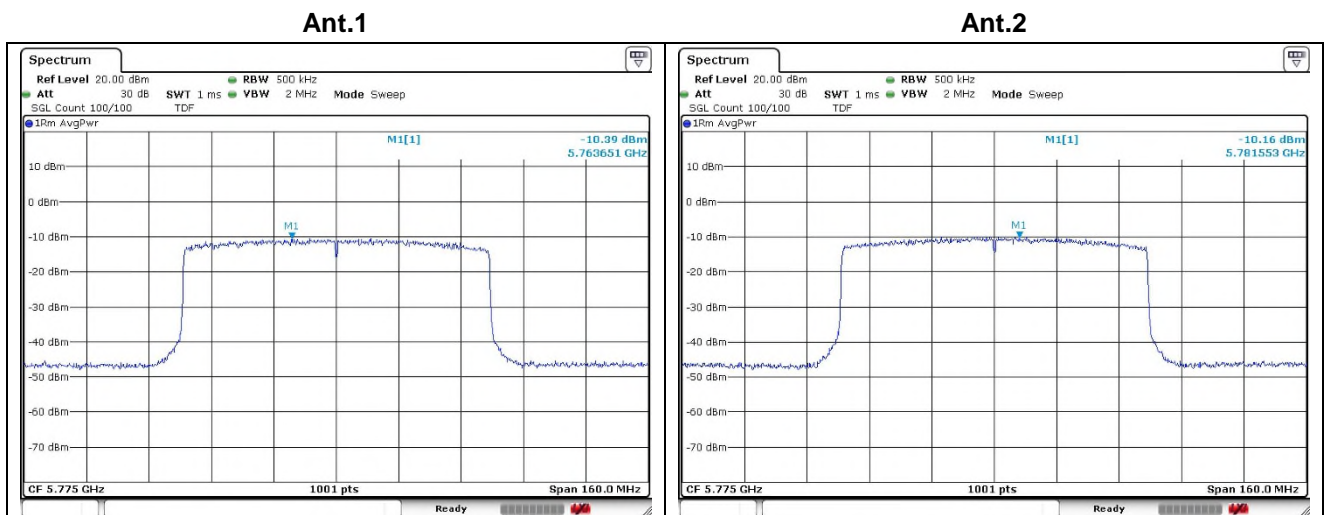
802.11ax_HE80 Band 3_Middle channel 242T



802.11ax_HE80 Band 3_Middle channel_242T



802.11ax_HE80 Band 3_Middle channel_SU

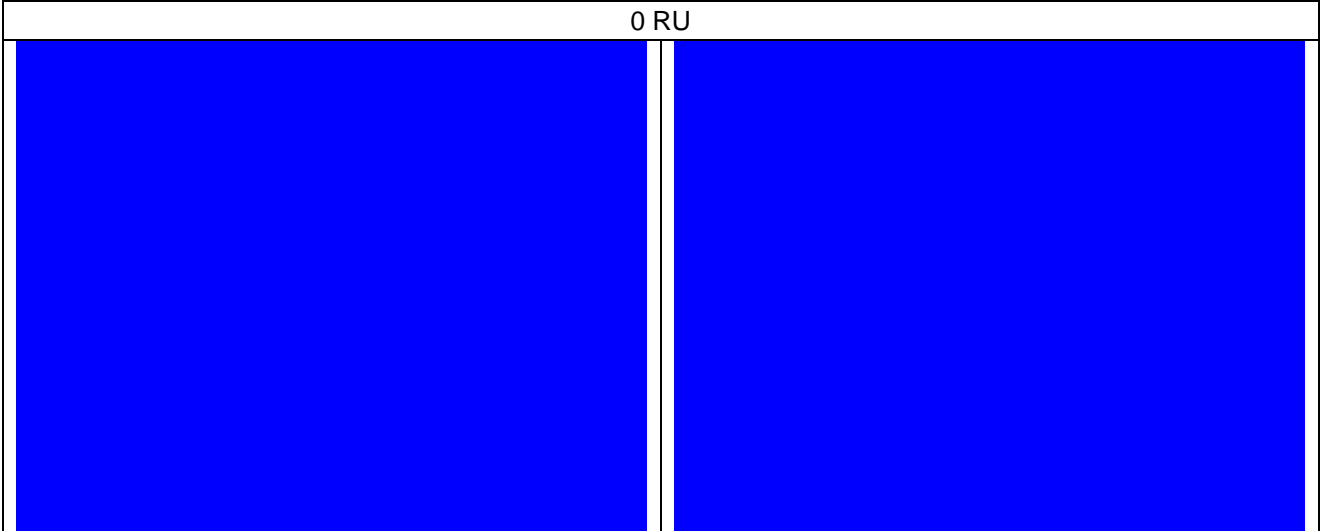


802.11ax_HE80 Band 2C_Straddle channel_26T

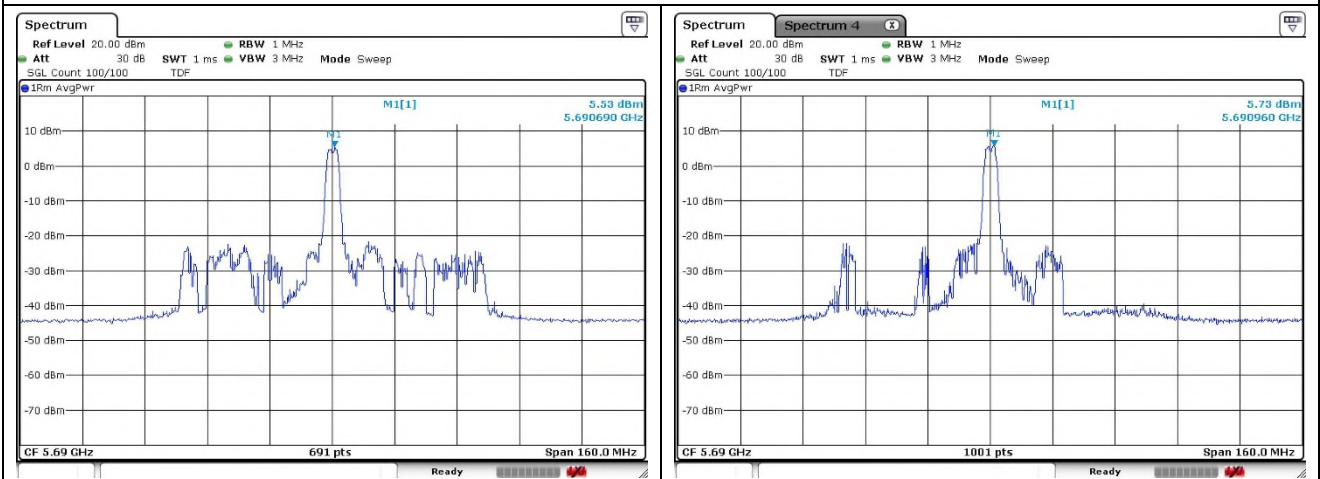
Ant.1

Ant.2

0 RU



18 RU

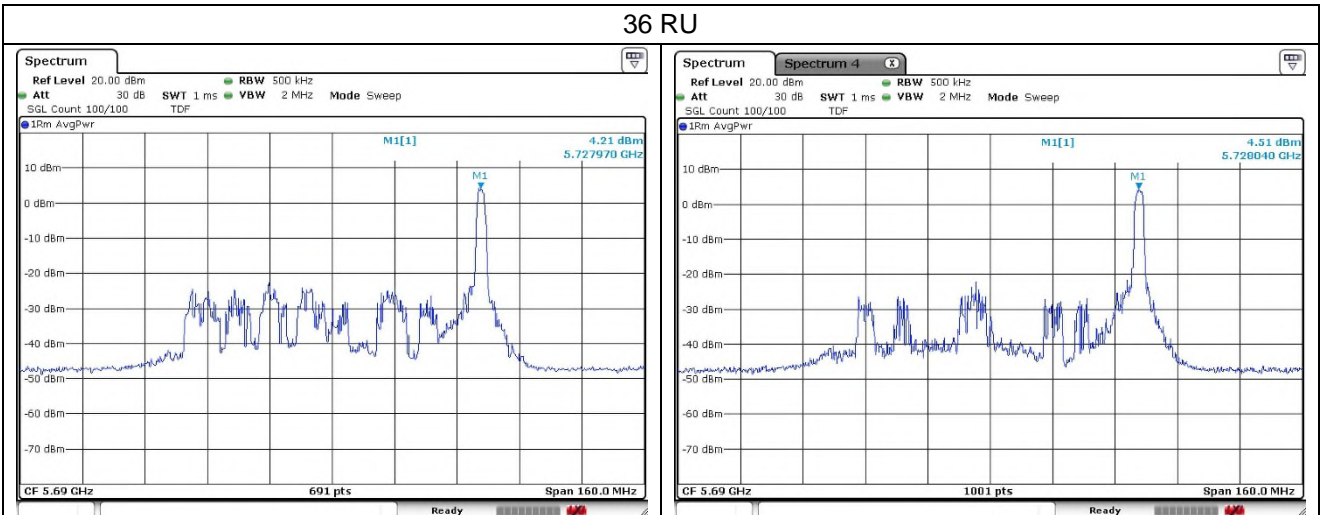


802.11ax_HE80 Band 3_Straddle channel_26T

Ant.1

Ant.2

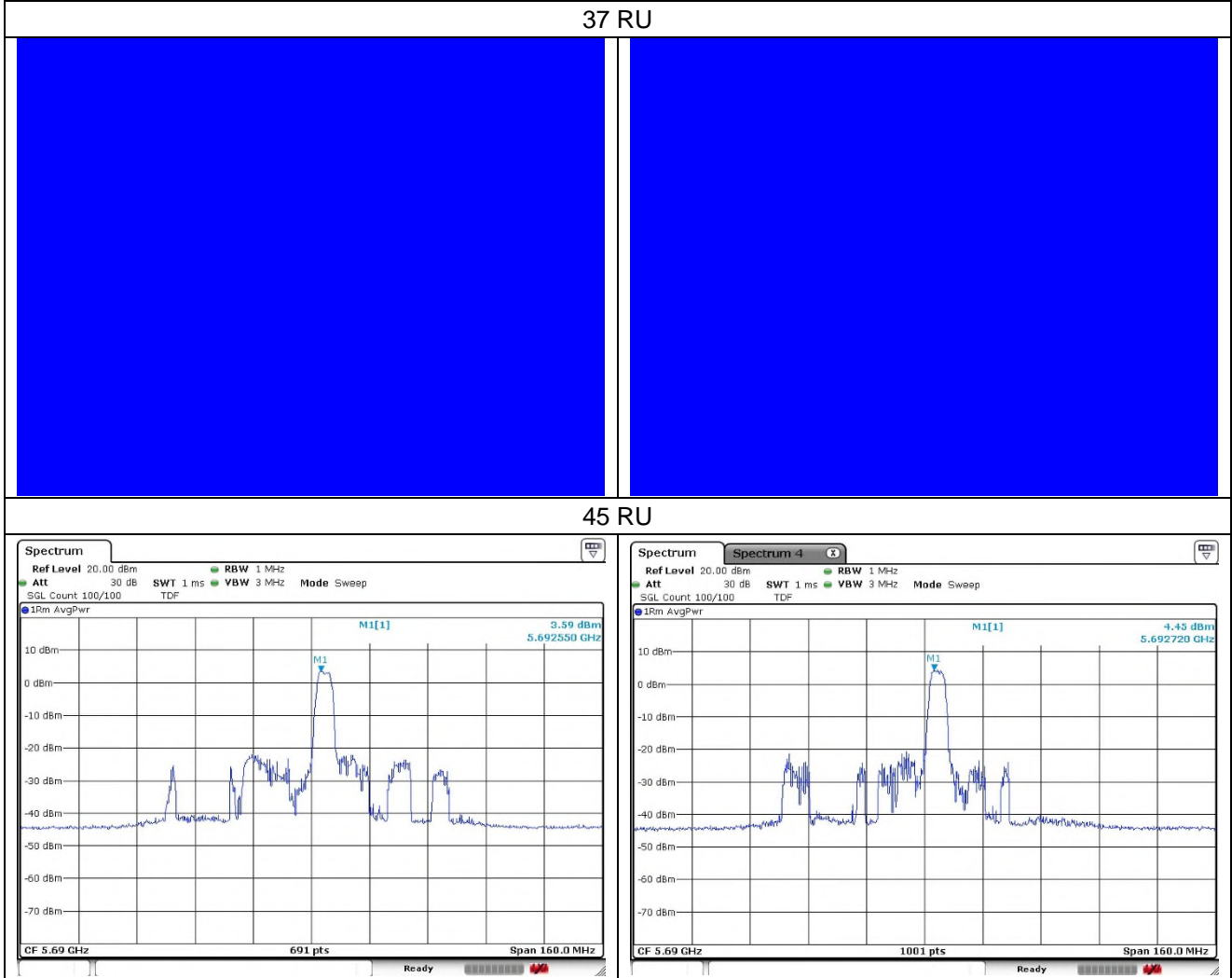
36 RU



802.11ax_HE80 Band 2C_Straddle channel_52T

Ant.1

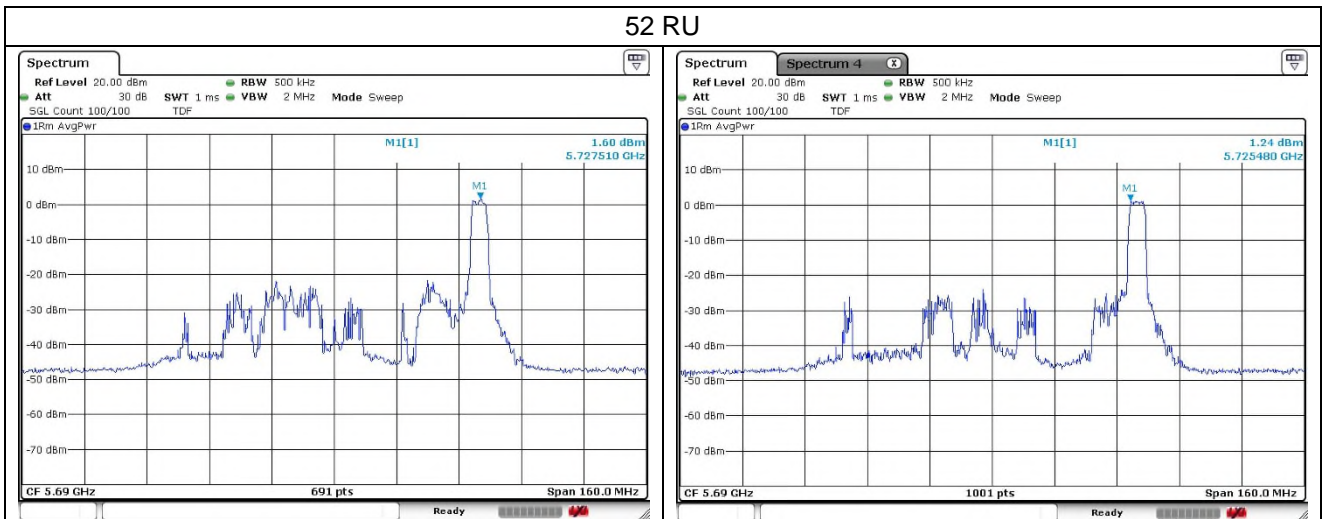
Ant.2



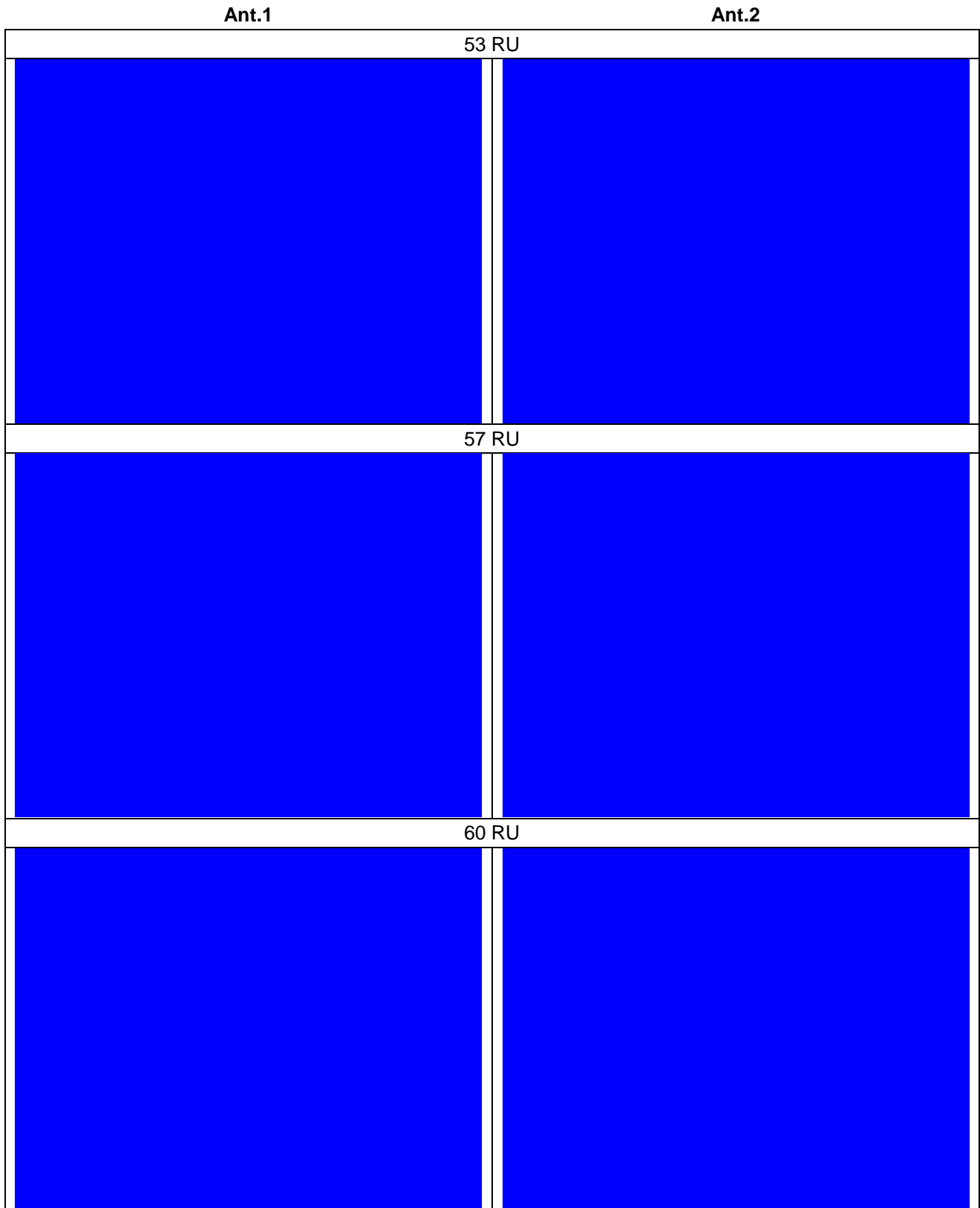
802.11ax_HE80 Band 3_Straddle channel_52T

Ant.1

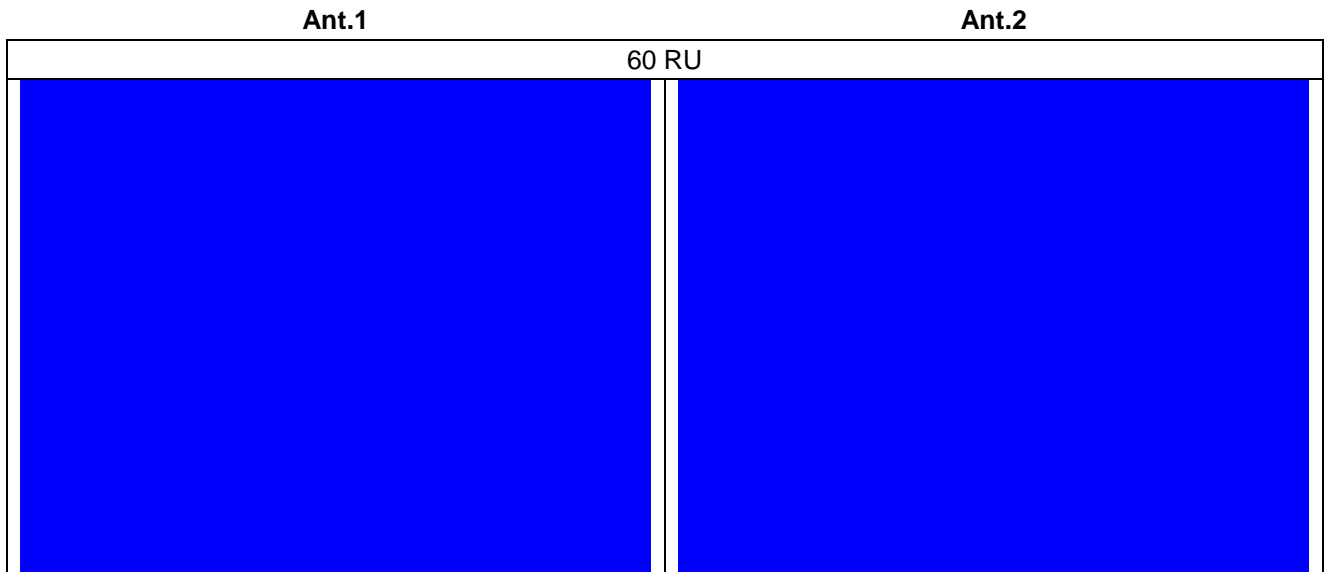
Ant.2



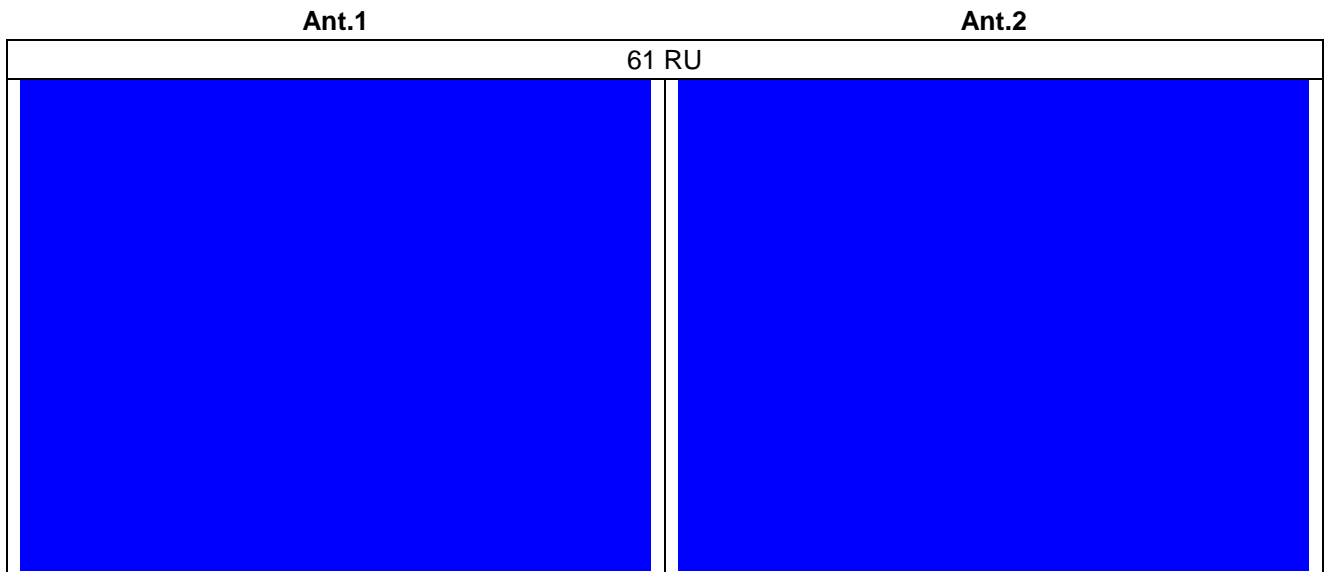
802.11ax_HE80 Band 2C_Straddle channel_106T



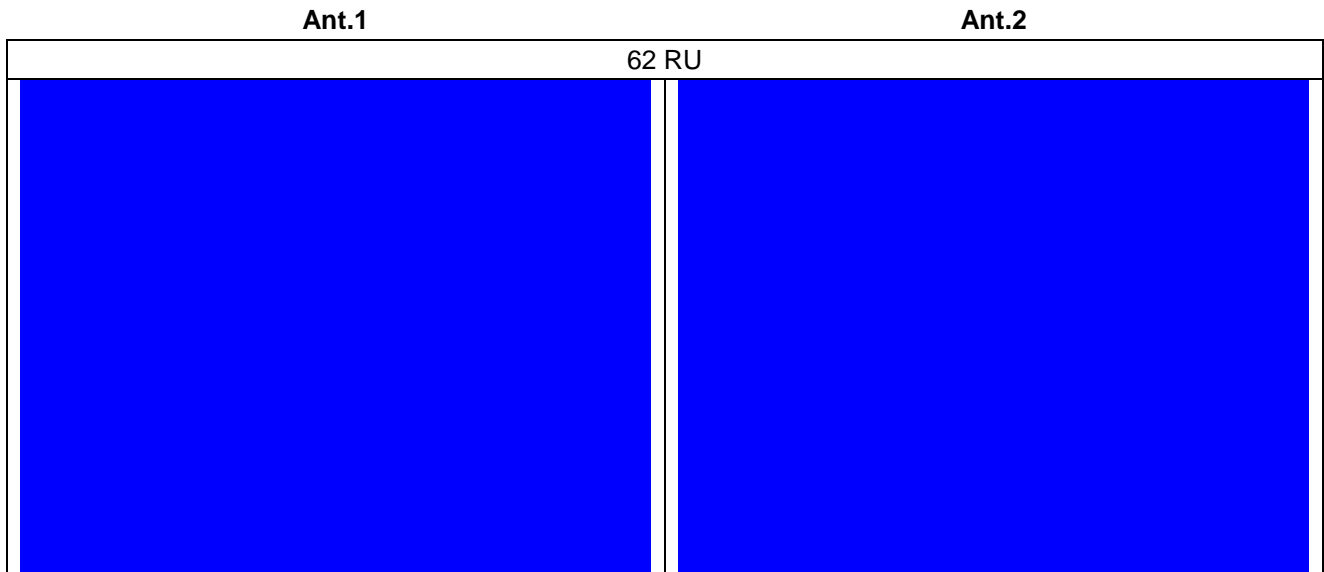
802.11ax_HE80 Band 3_Straddle channel_106T



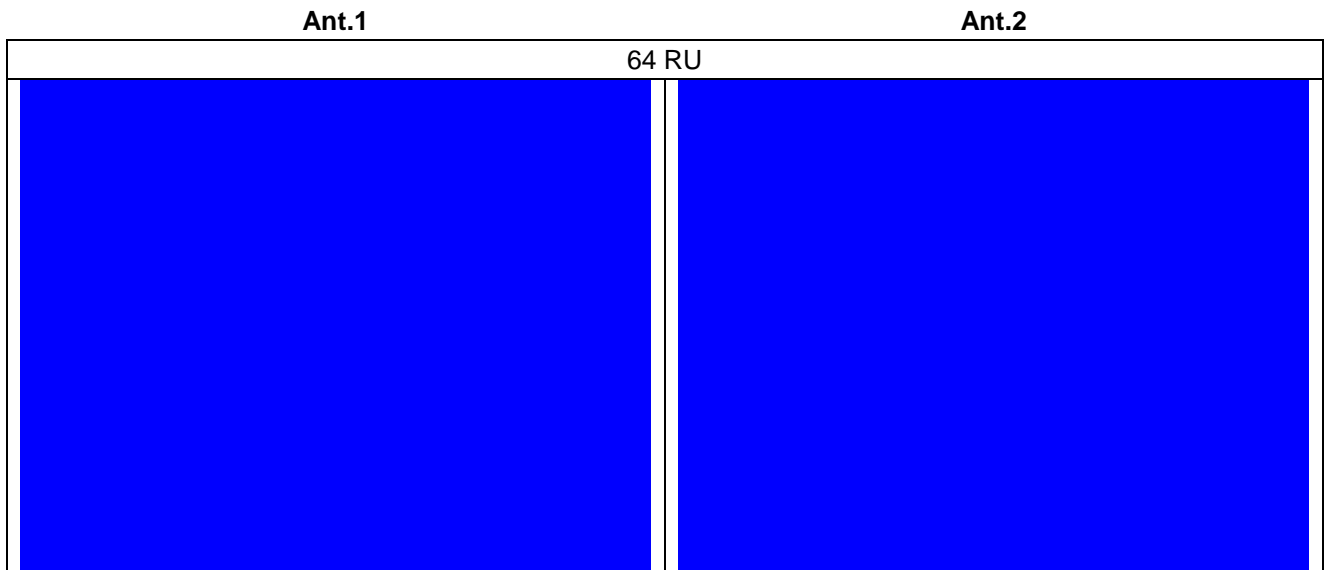
802.11ax_HE80 Band 2C_Straddle channel_242T



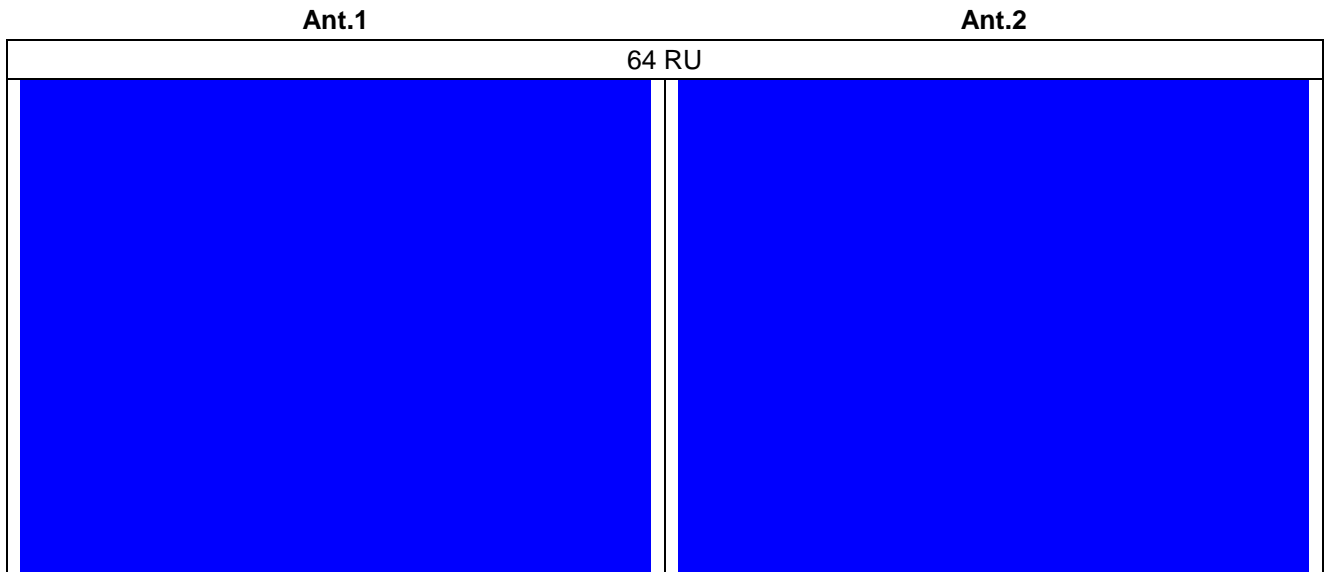
802.11ax_HE80 Band 2C_Straddle channel 242T



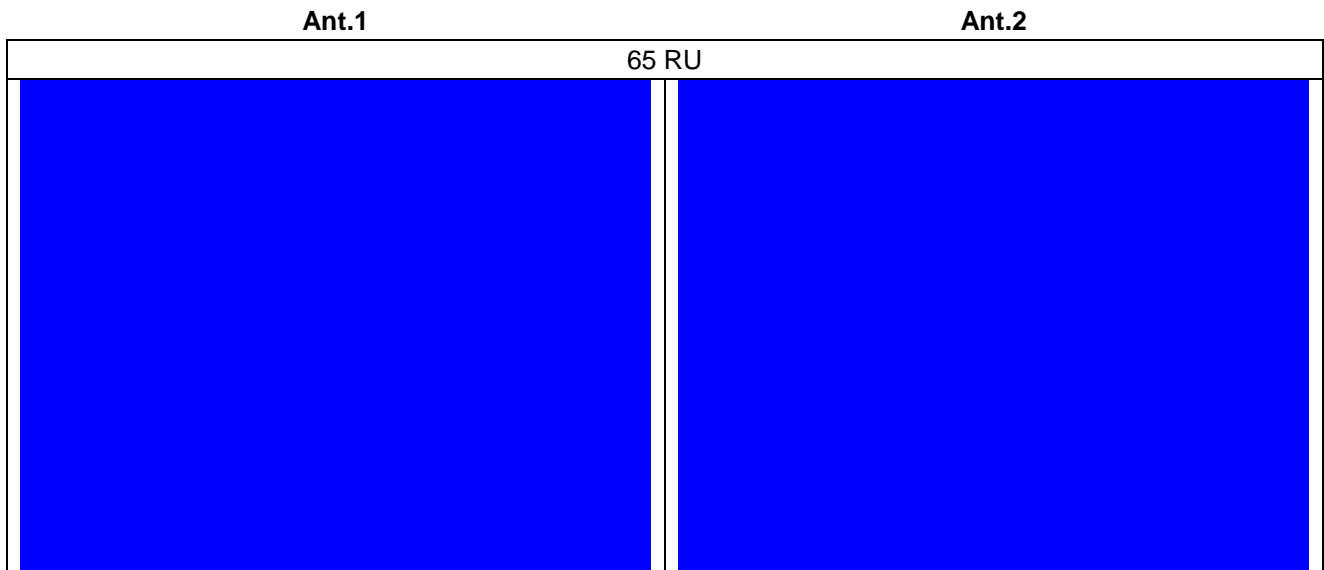
802.11ax_HE80 Band 2C_Straddle channel_242T



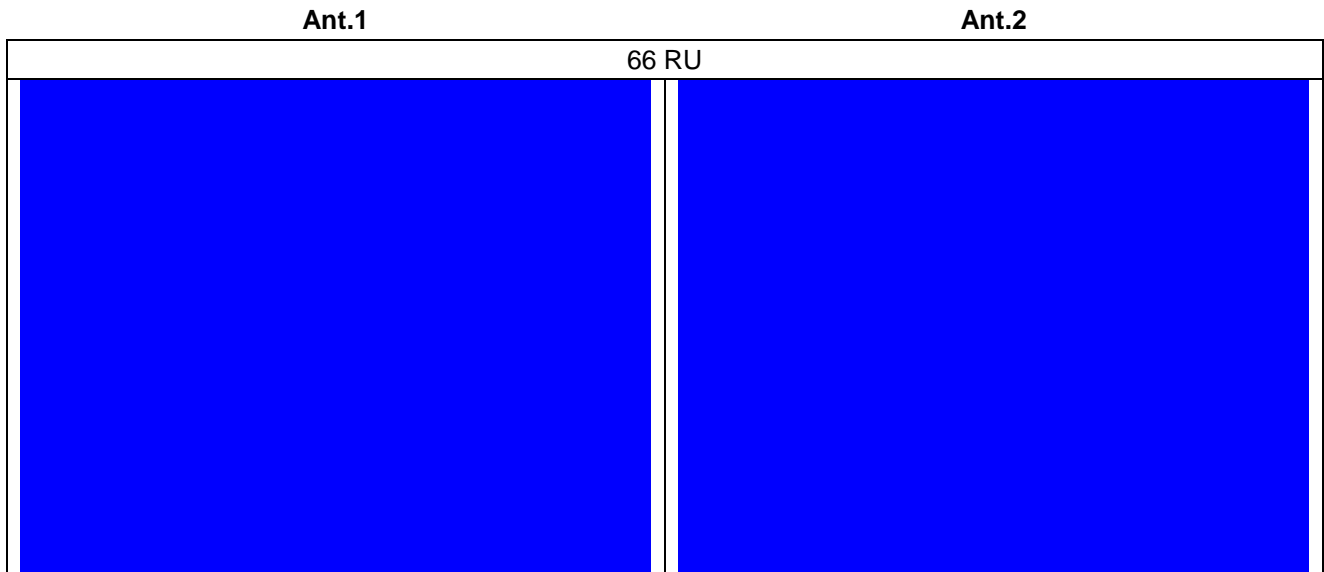
802.11ax_HE80 Band 3_Straddle channel_242T



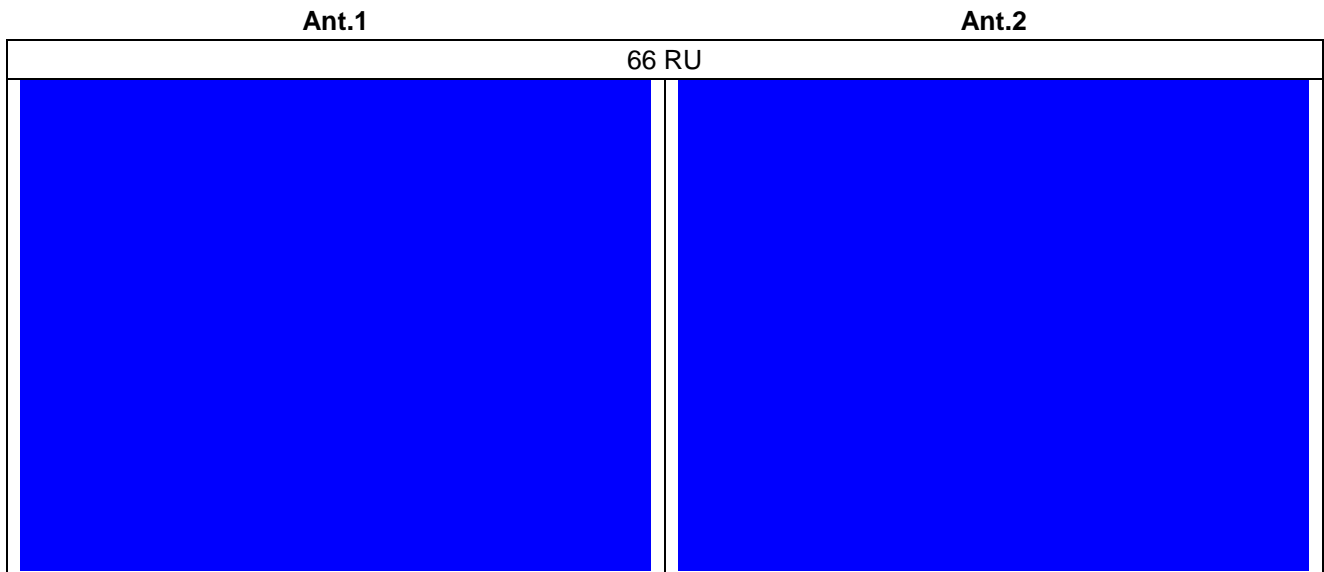
802.11ax_HE80 Band 2C_Straddle channel_484T



802.11ax_HE80 Band 2C_Straddle channel_484T



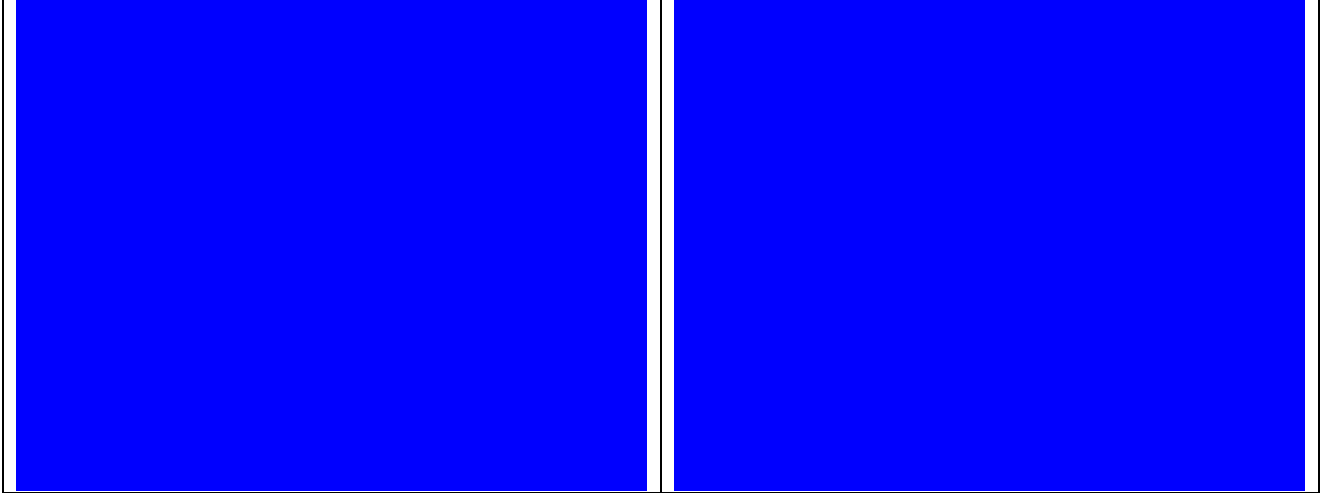
802.11ax_HE80 Band 3_Straddle channel_484T



802.11ax_HE80 Band 2C_Straddle channel_SU

Ant.1

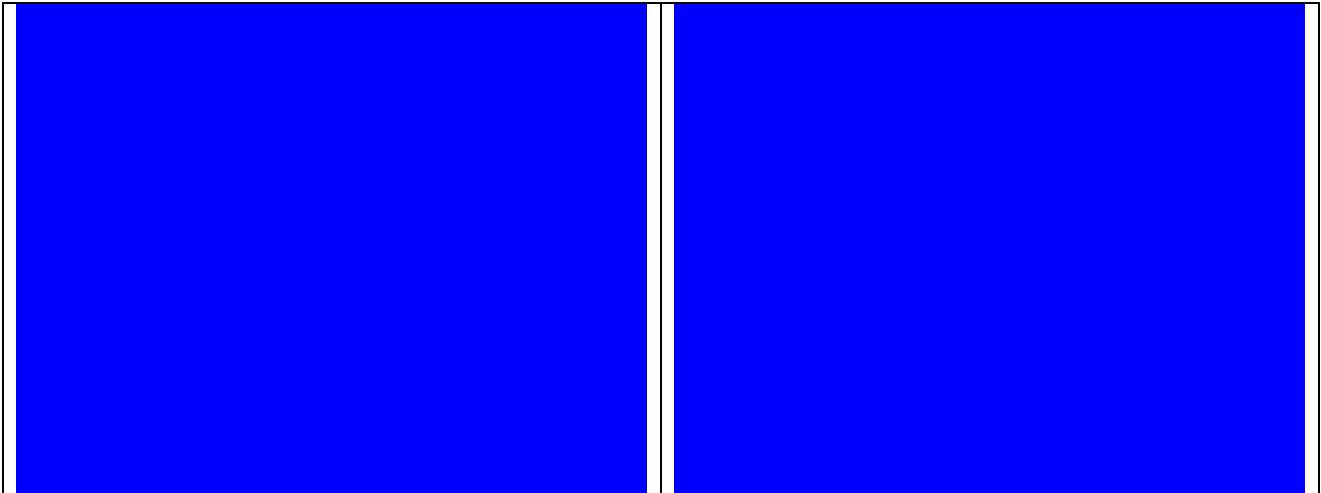
Ant.2



802.11ax_HE80 Band 3_Straddle channel_SU

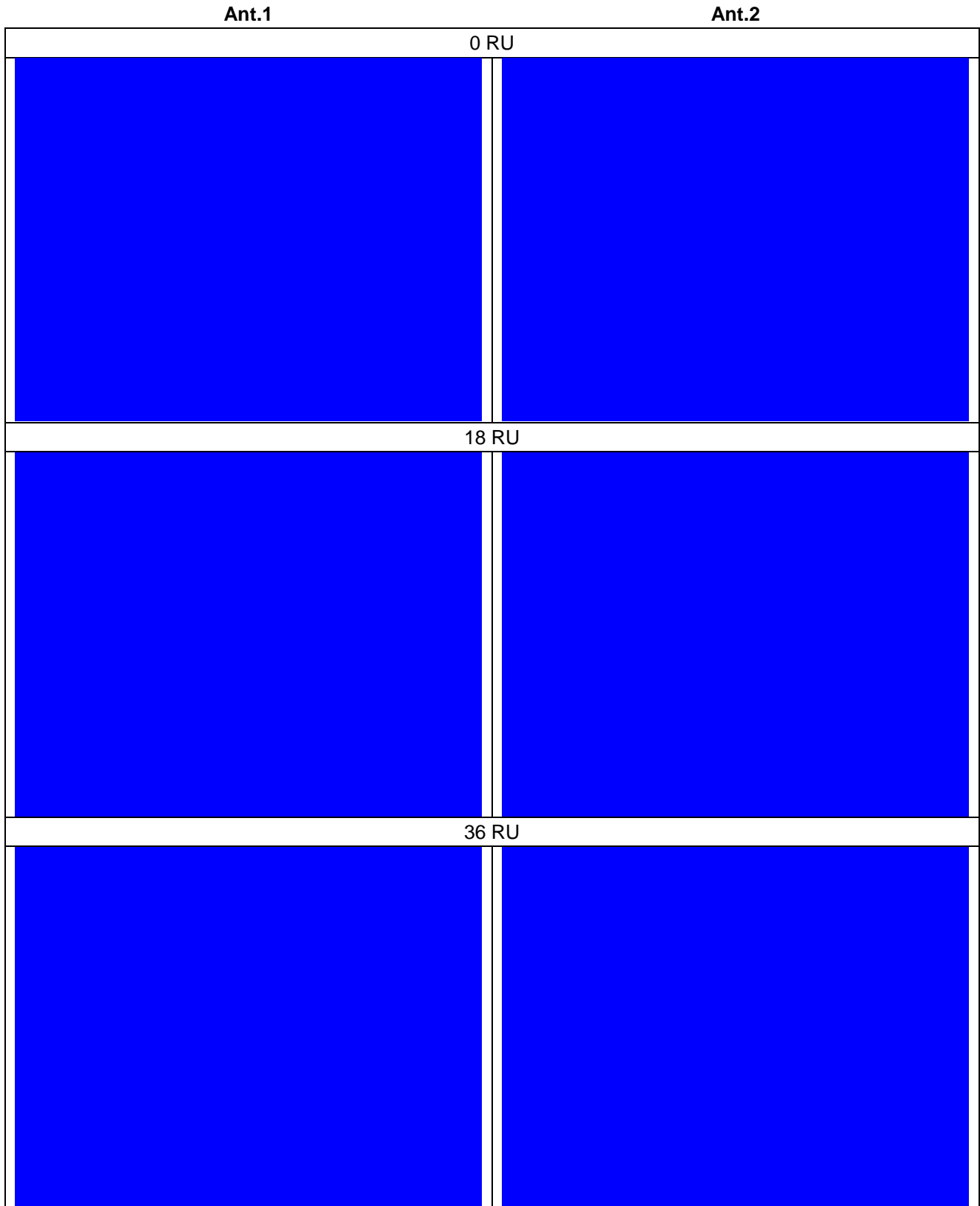
Ant.1

Ant.2

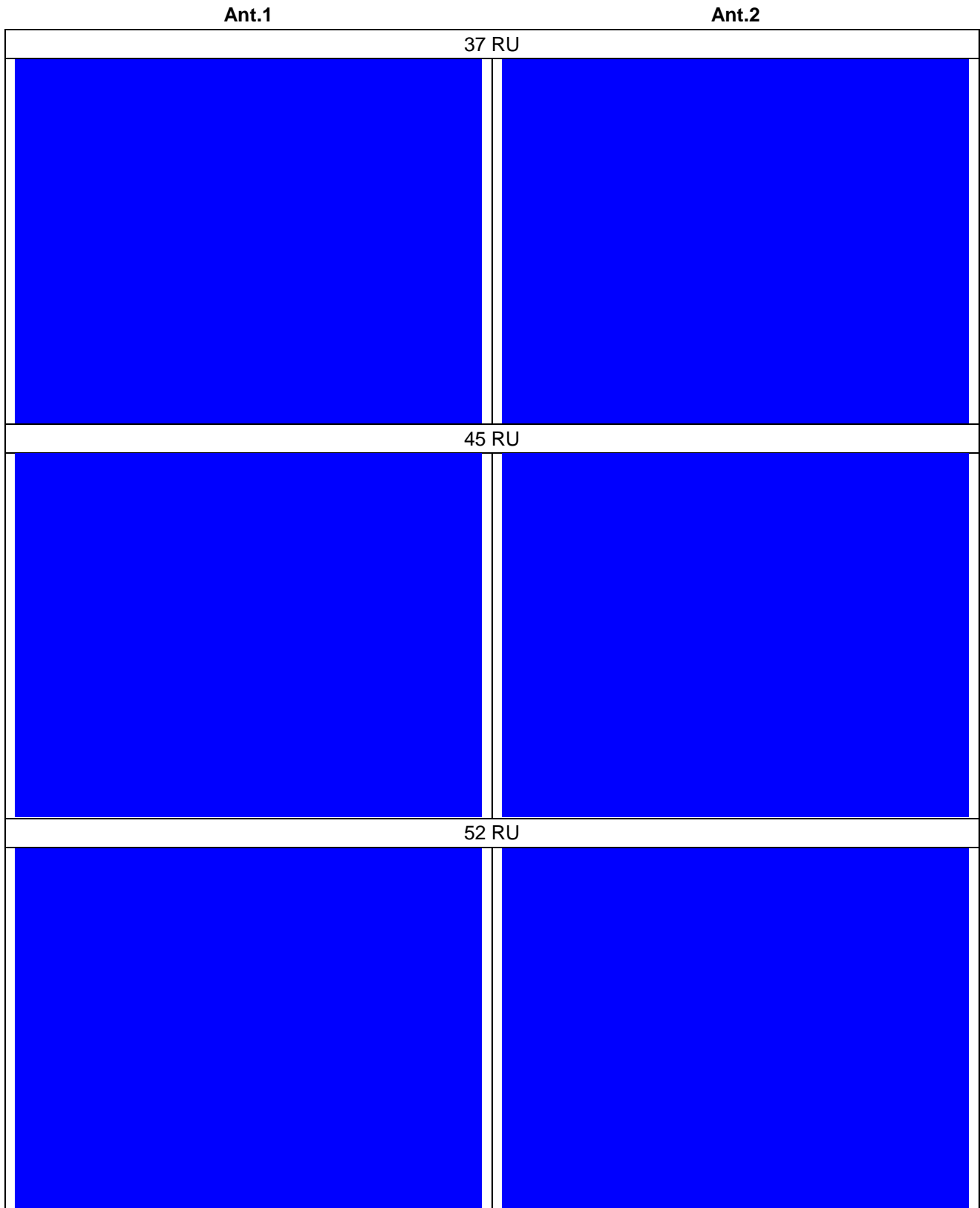


- MIMO

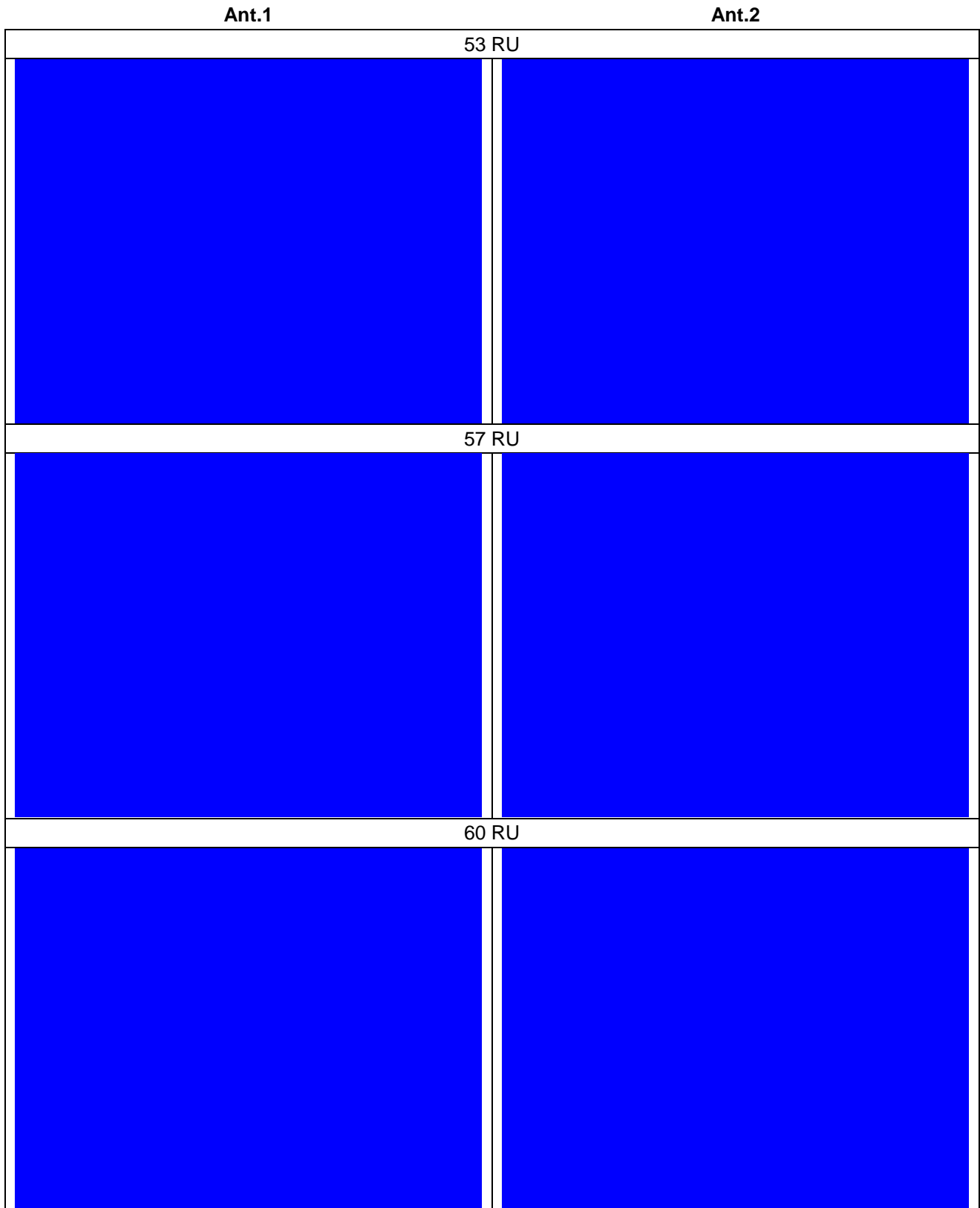
802.11ax_HE80 Band 1_Middle channel_26T



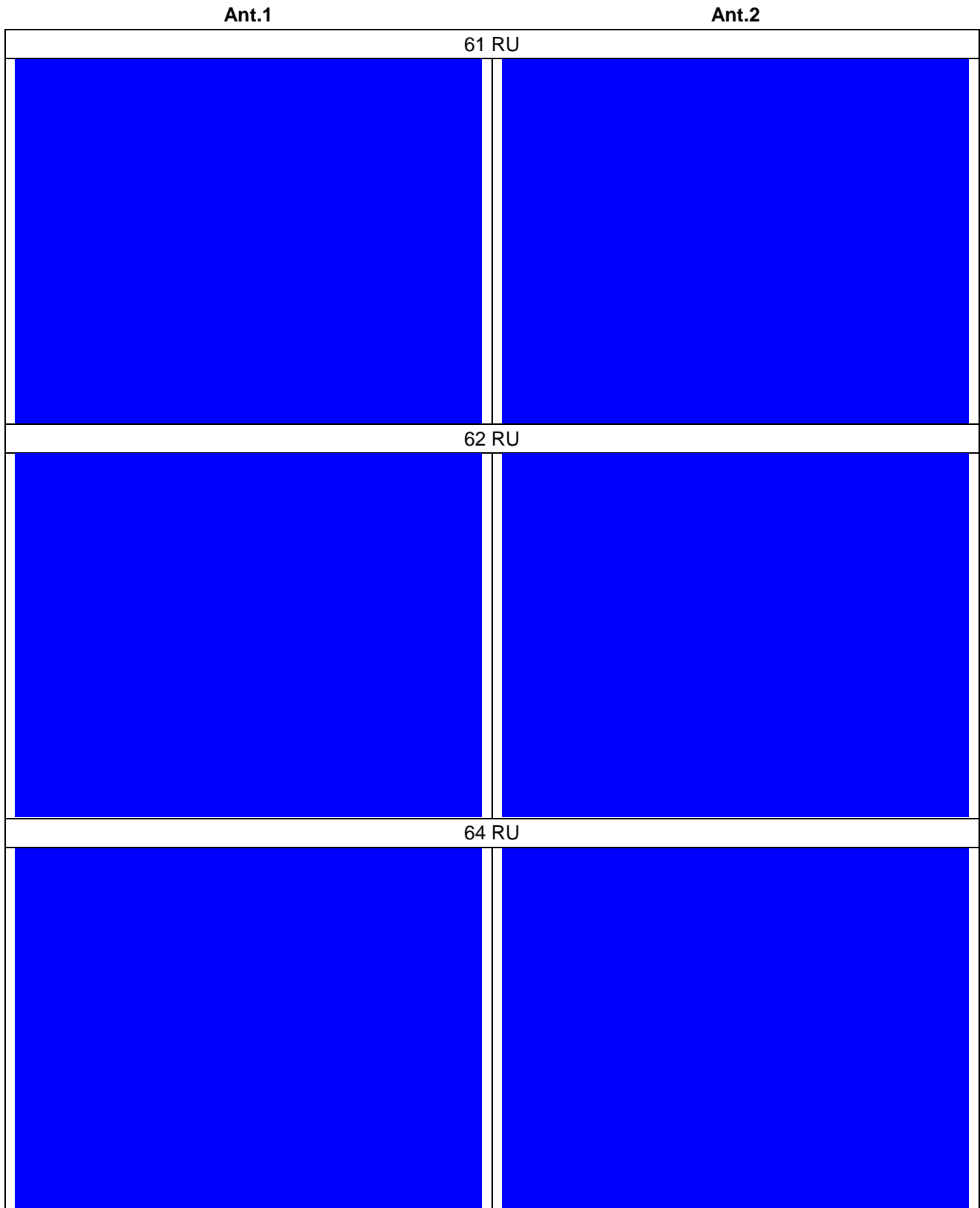
802.11ax_HE80 Band 1_Middle channel_52T



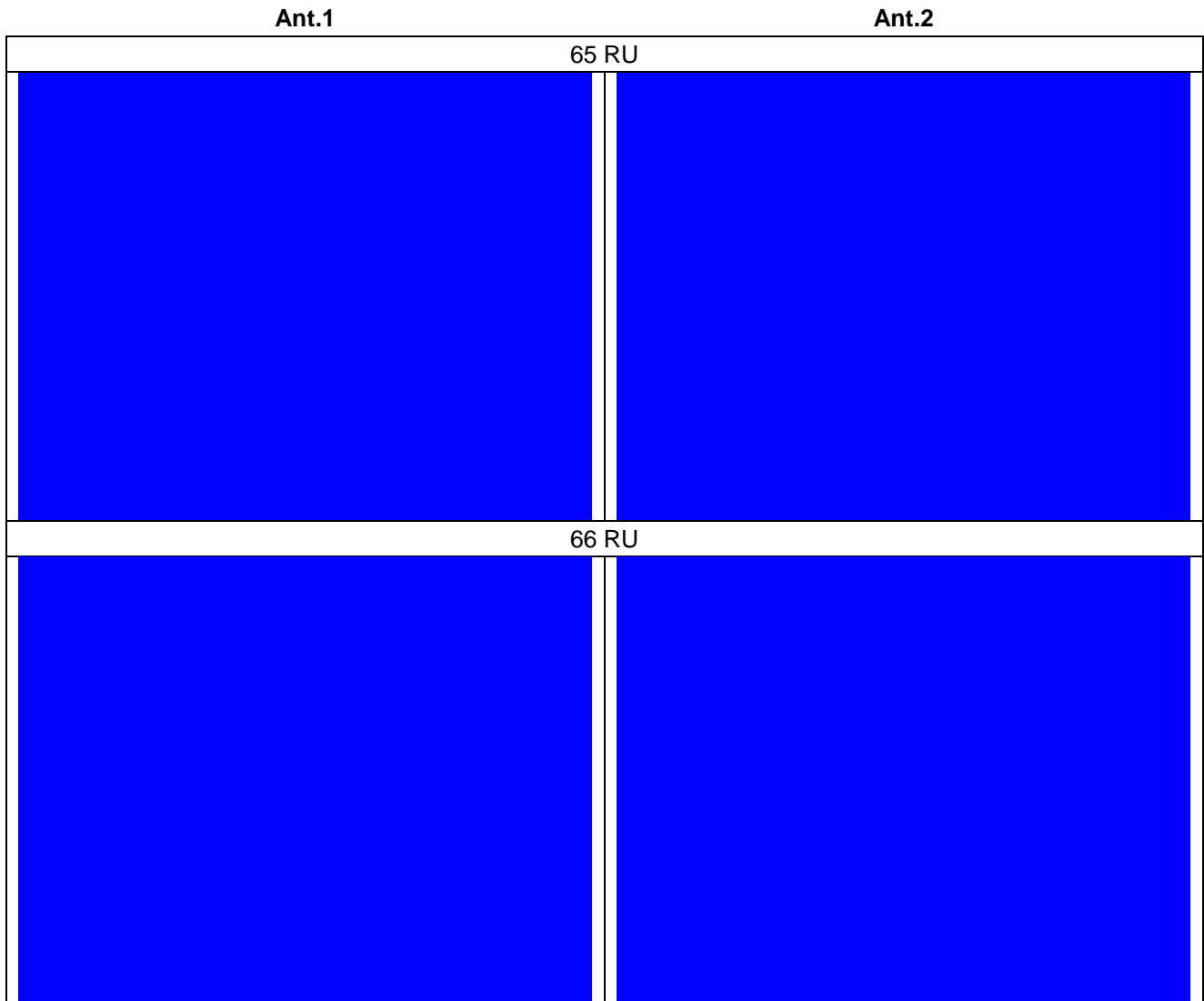
802.11ax_HE80 Band 1_Middle channel_106T



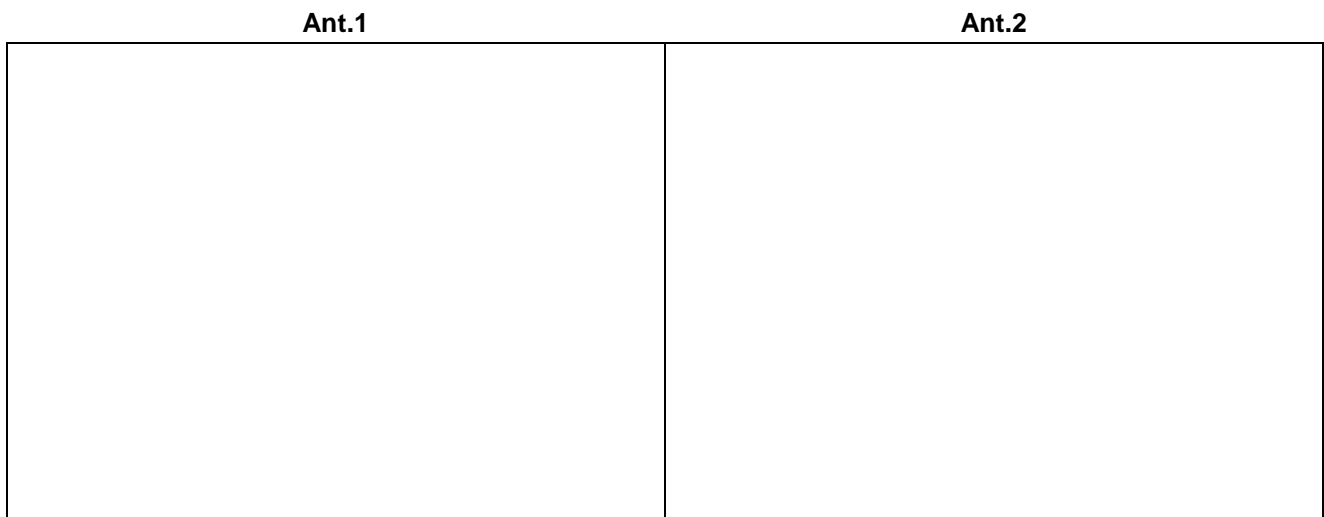
802.11ax_HE80 Band 1_Middle channel_242T



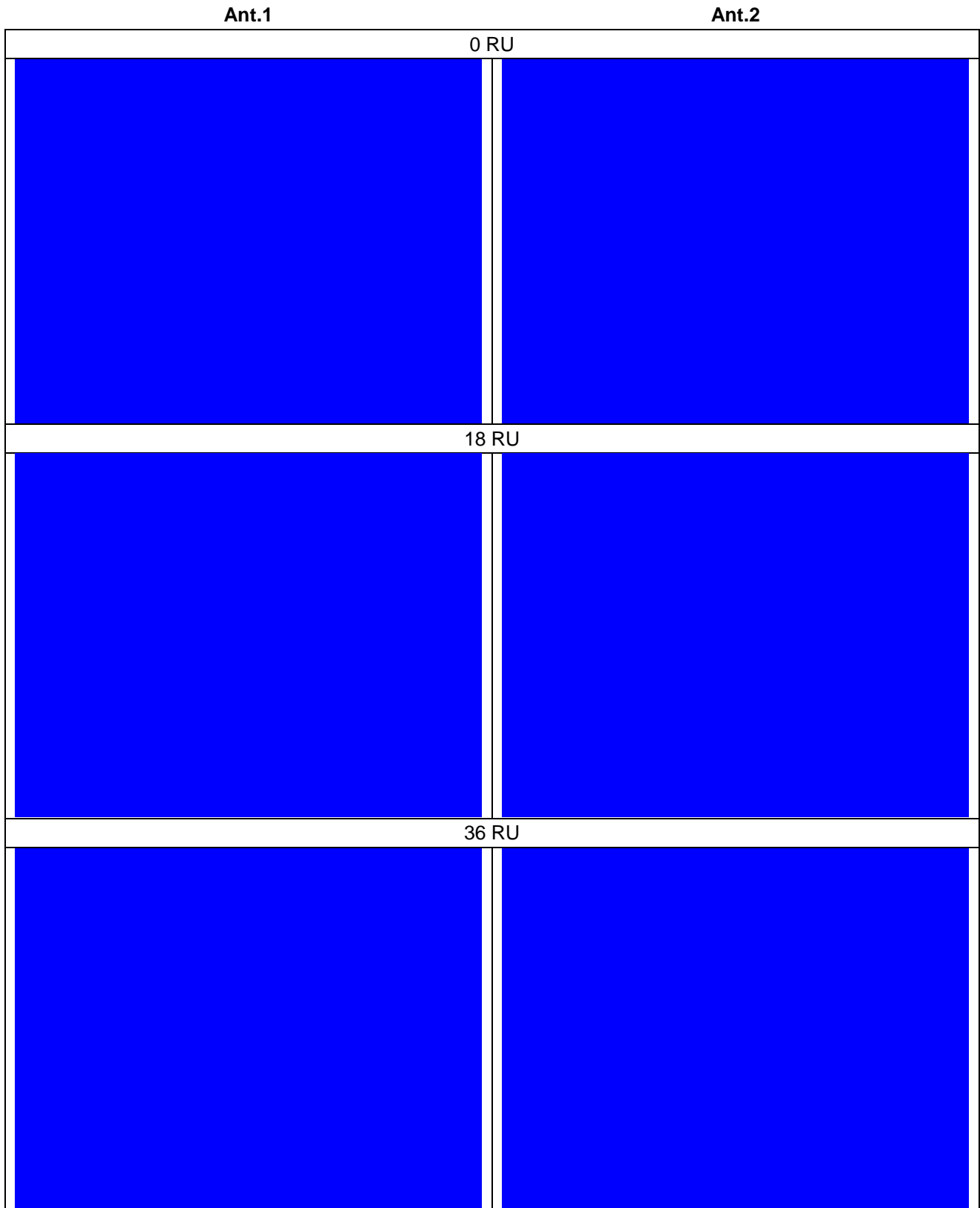
802.11ax_HE80 Band 1_Middle channel_242T



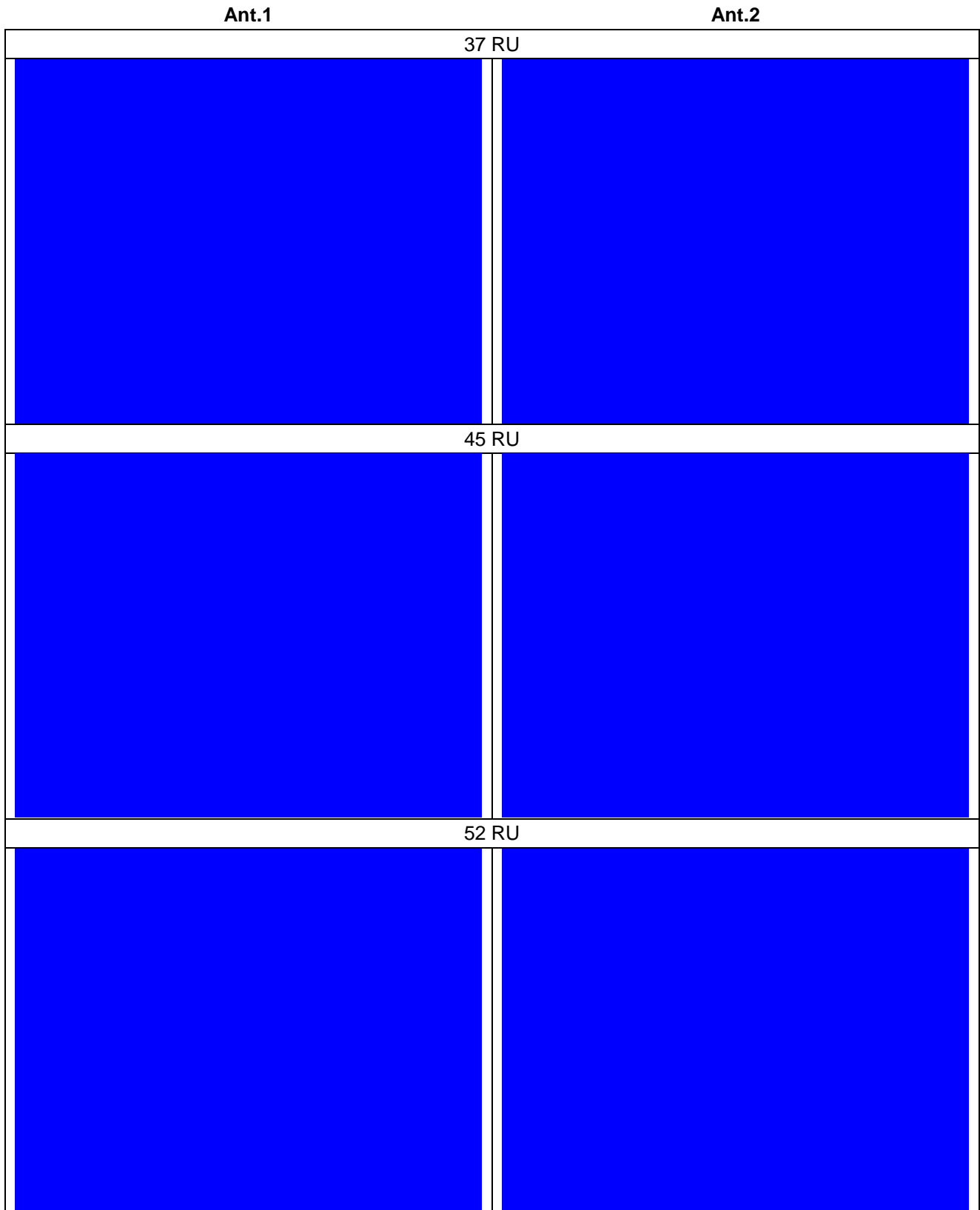
802.11ax_HE80 Band 1_Middle channel_SU



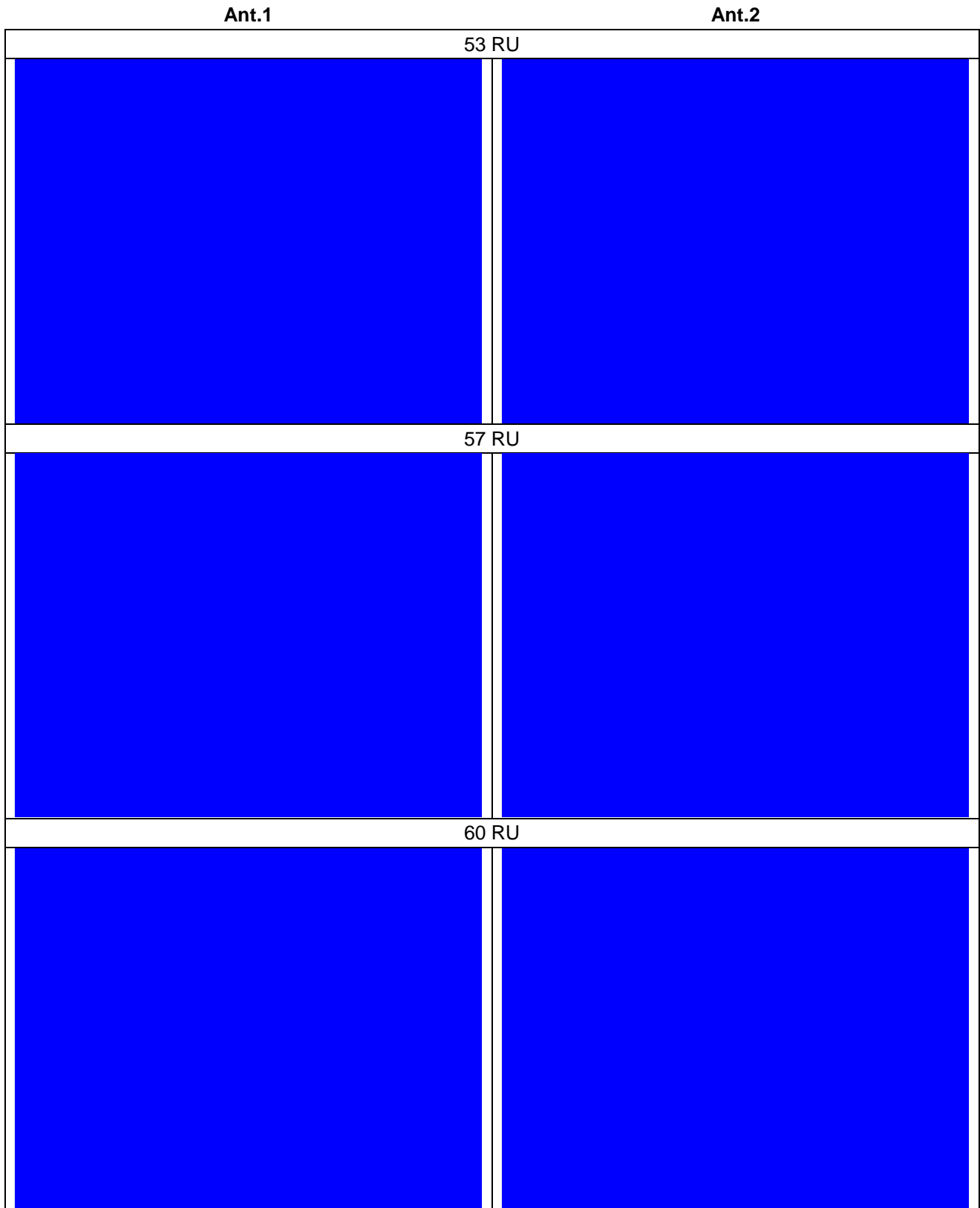
802.11ax_HE80 Band 2A_Middle channel_26T



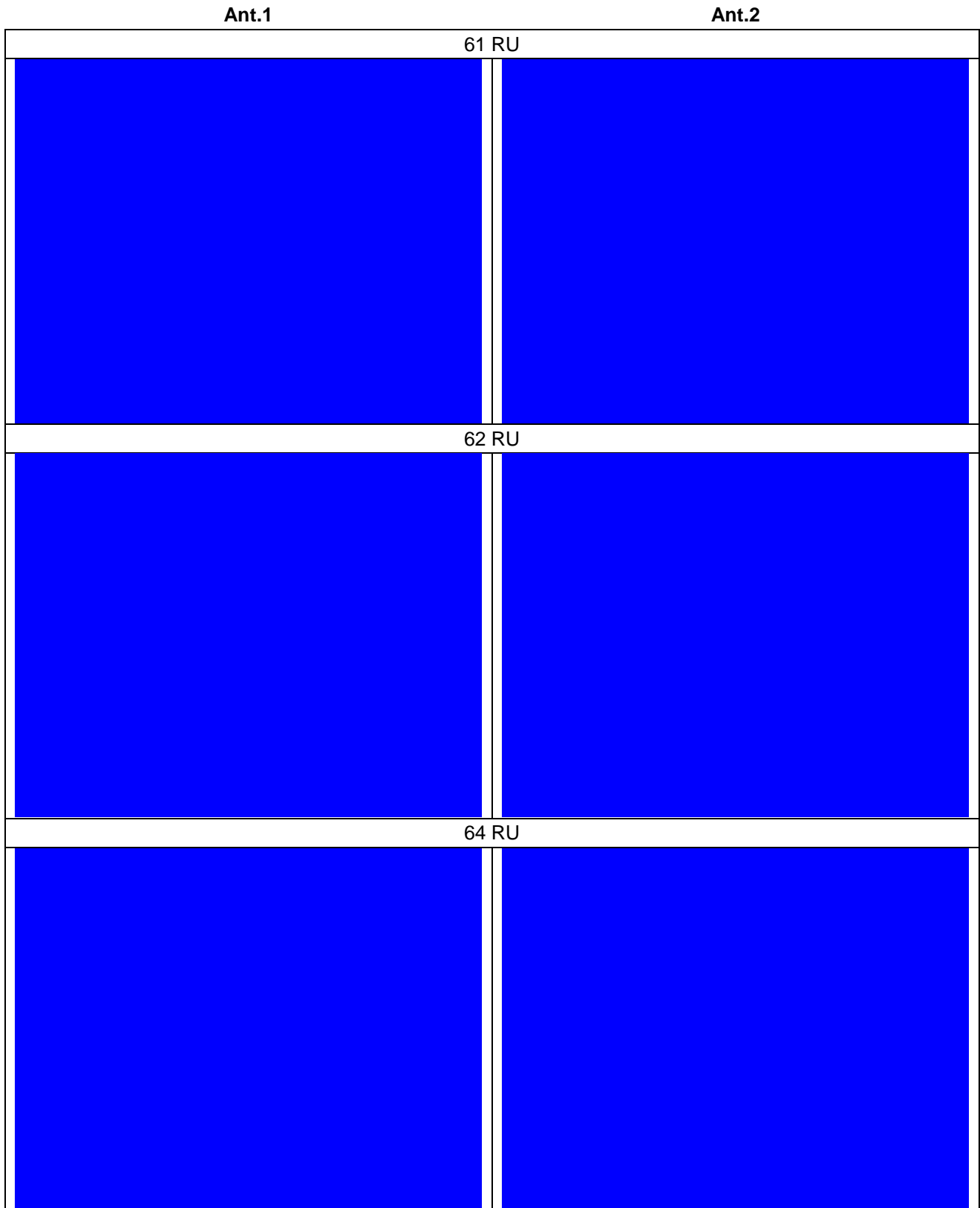
802.11ax_HE80 Band 2A_Middle channel_52T



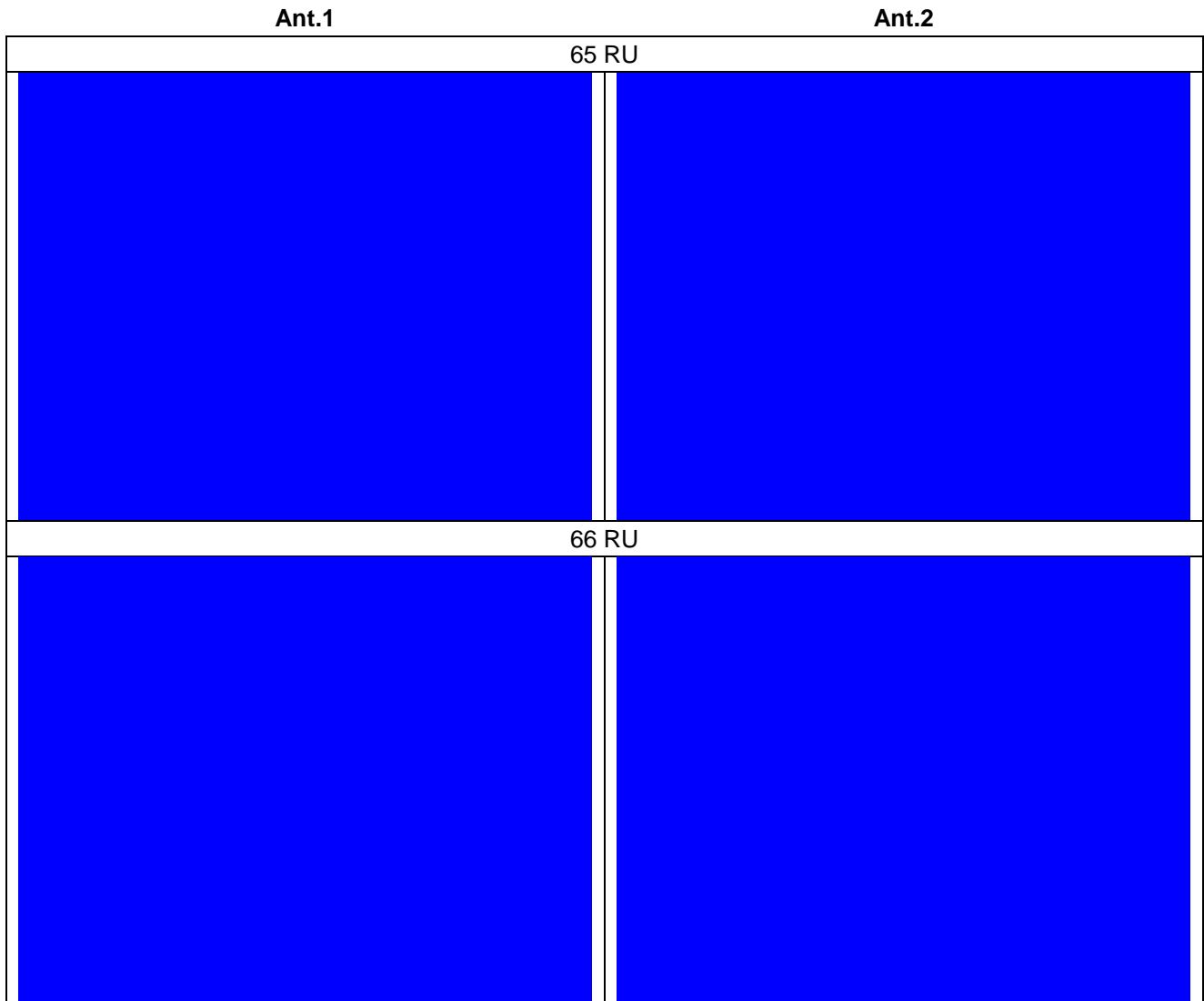
802.11ax_HE80 Band 2A_Middle channel_106T



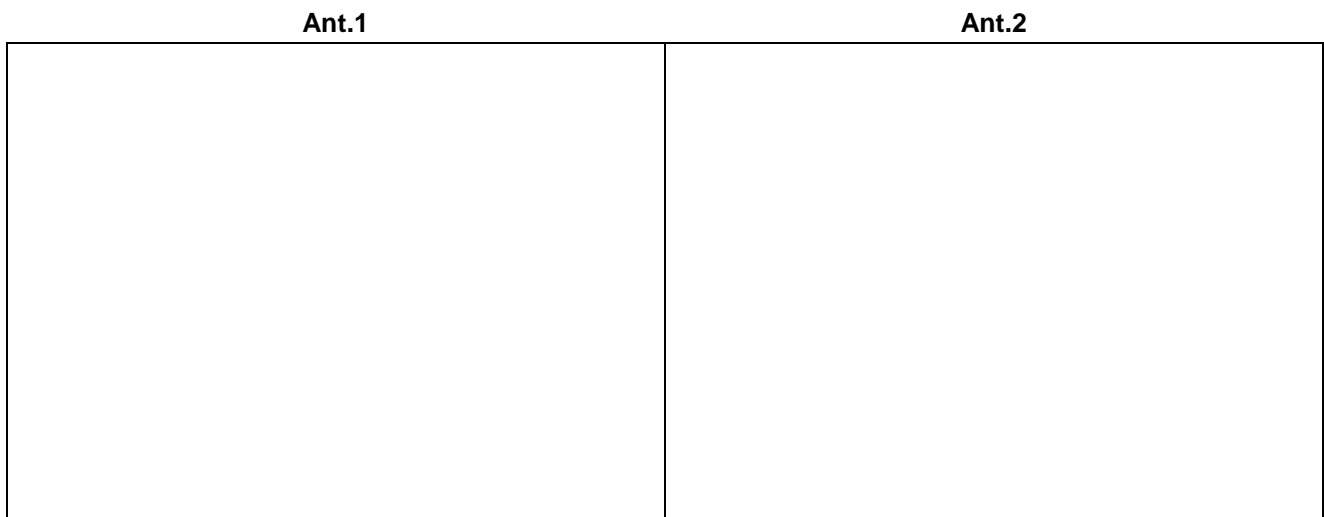
802.11ax_HE80 Band 2A_Middle channel_242T



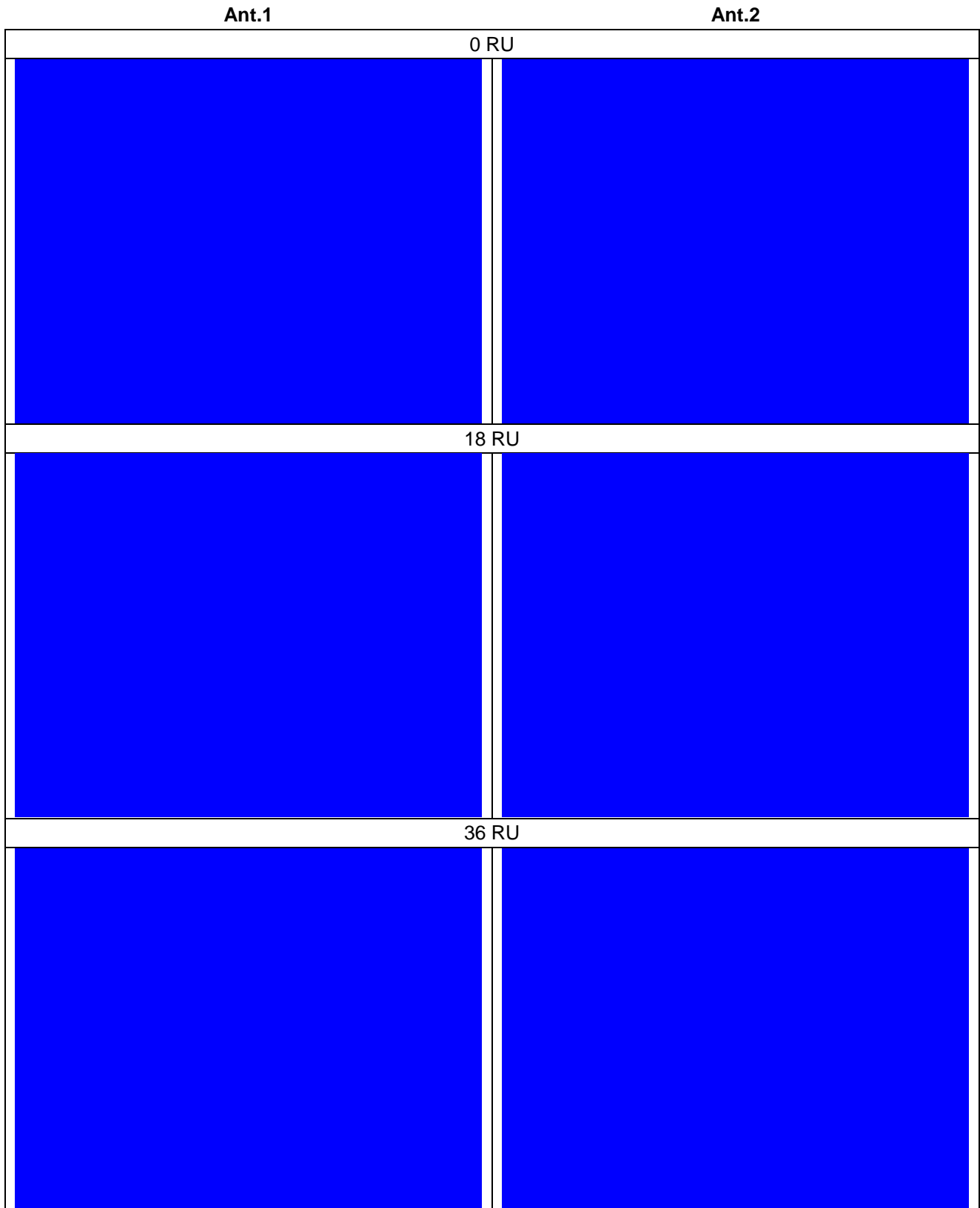
802.11ax_HE80 Band 2A_Middle channel_242T



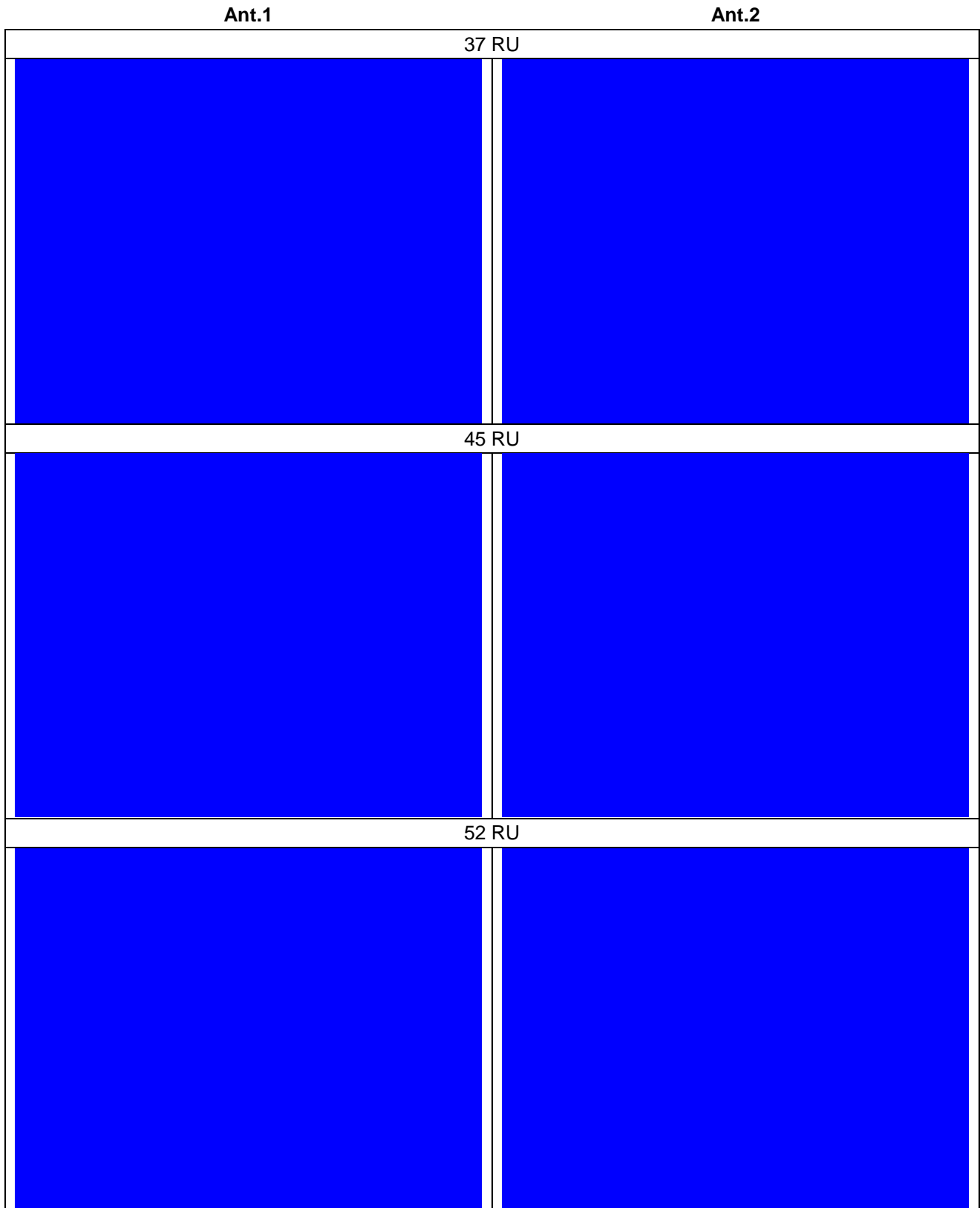
802.11ax_HE80 Band 2A_Middle channel_SU



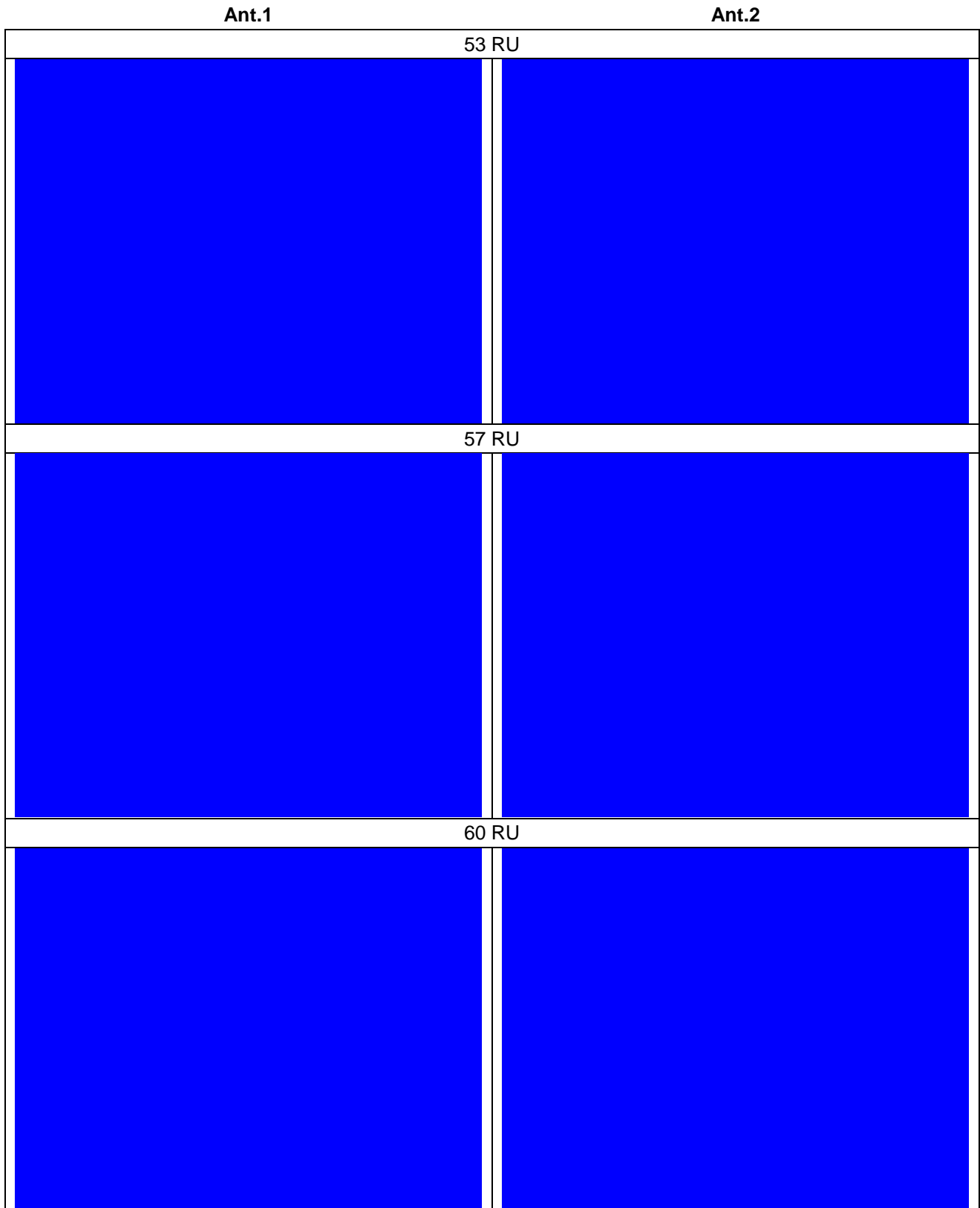
802.11ax_HE80 Band 2C_Low channel_26T



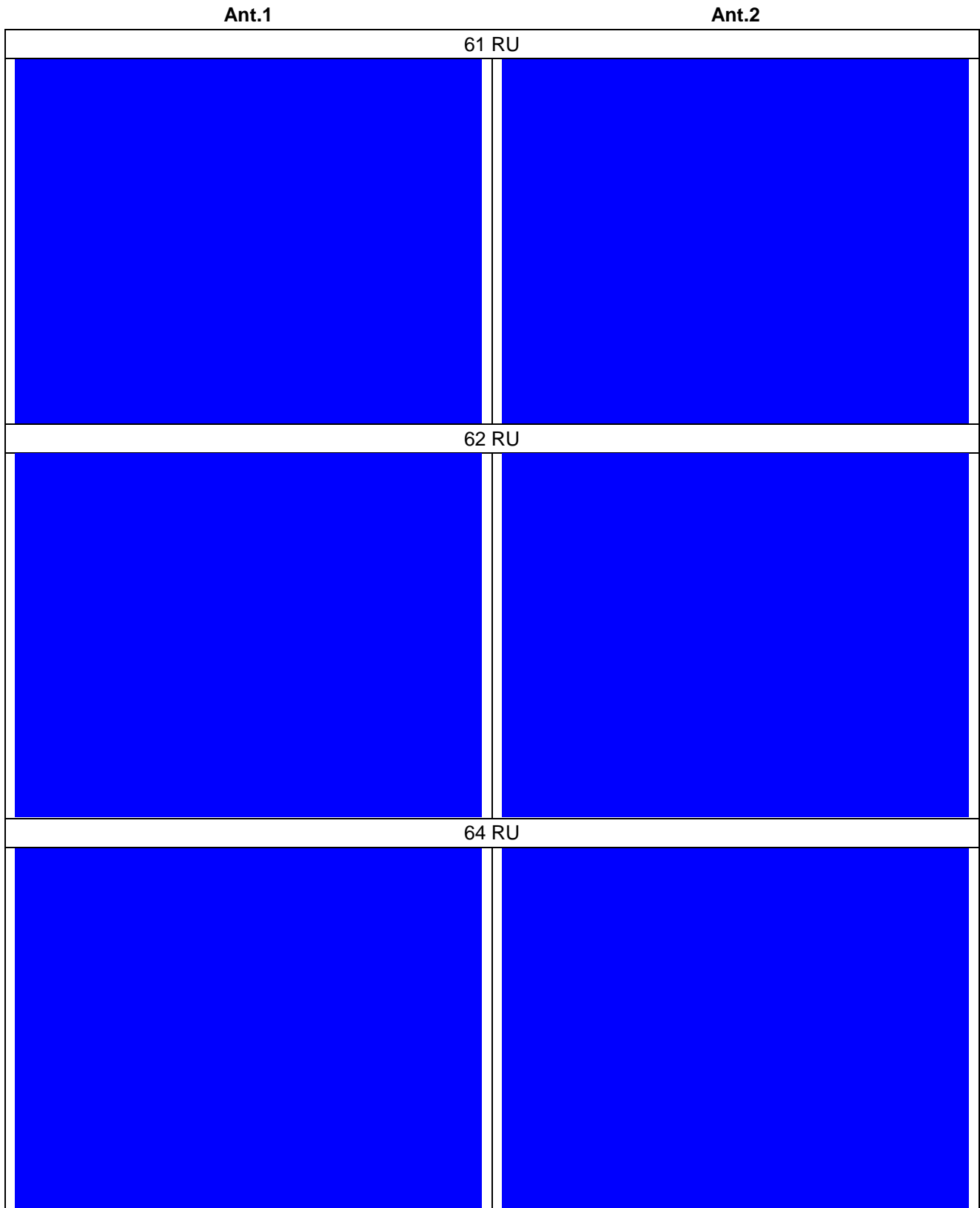
802.11ax_HE80 Band 2C_Low channel_52T



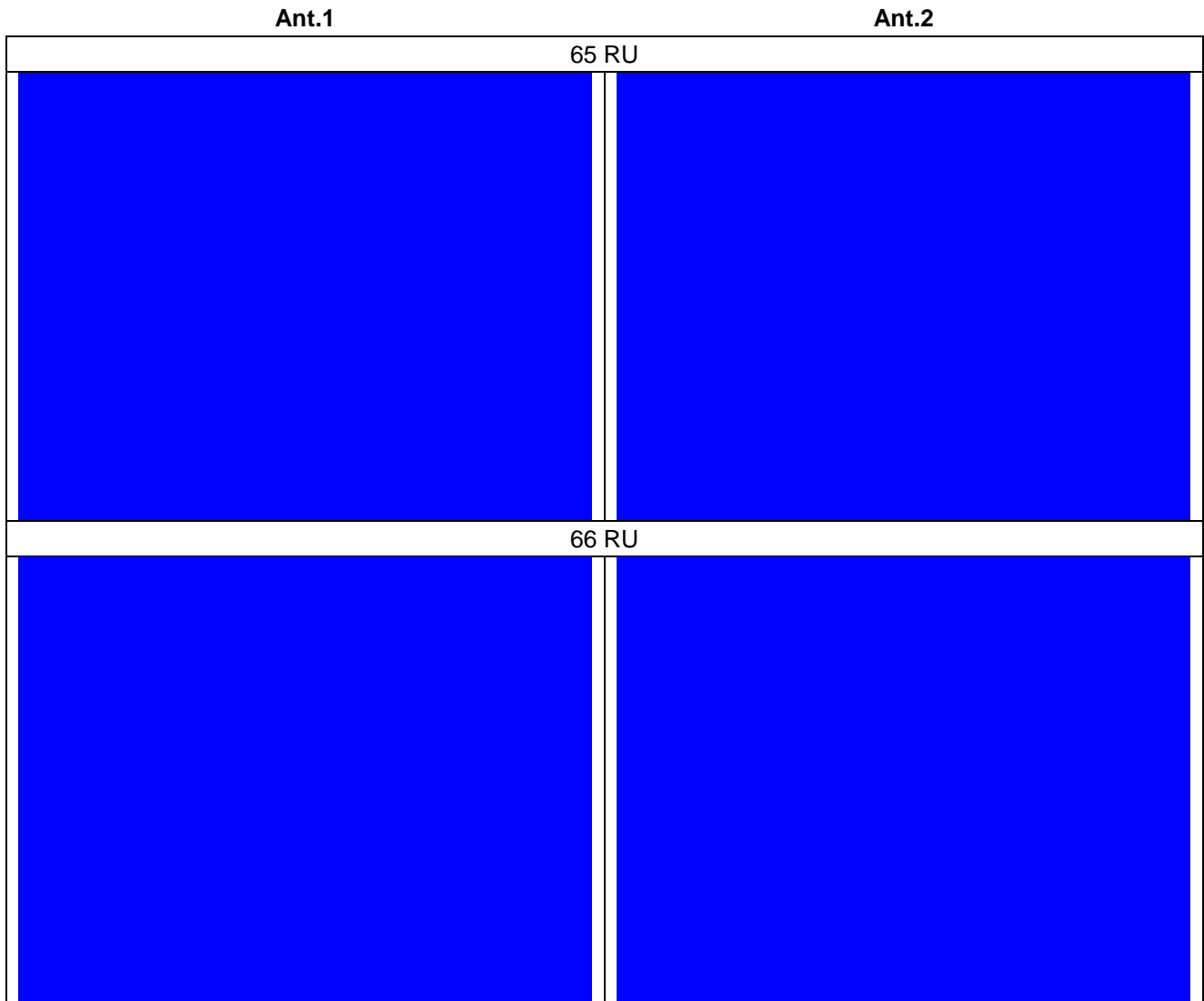
802.11ax_HE80 Band 2C_Low channel_106T



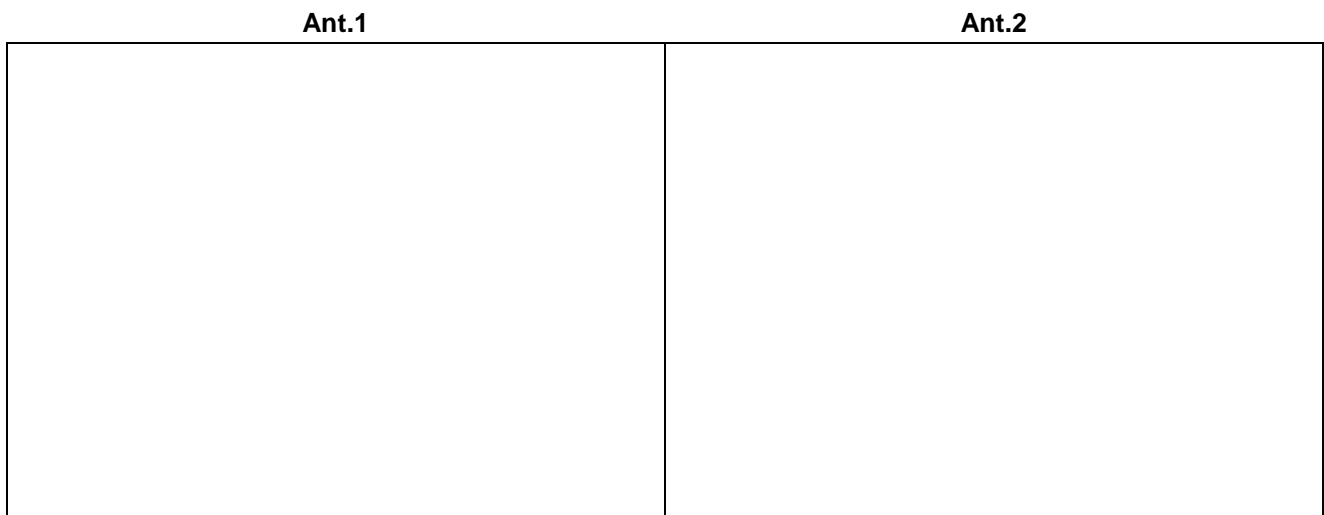
802.11ax_HE80 Band 2C_Low channel_242T



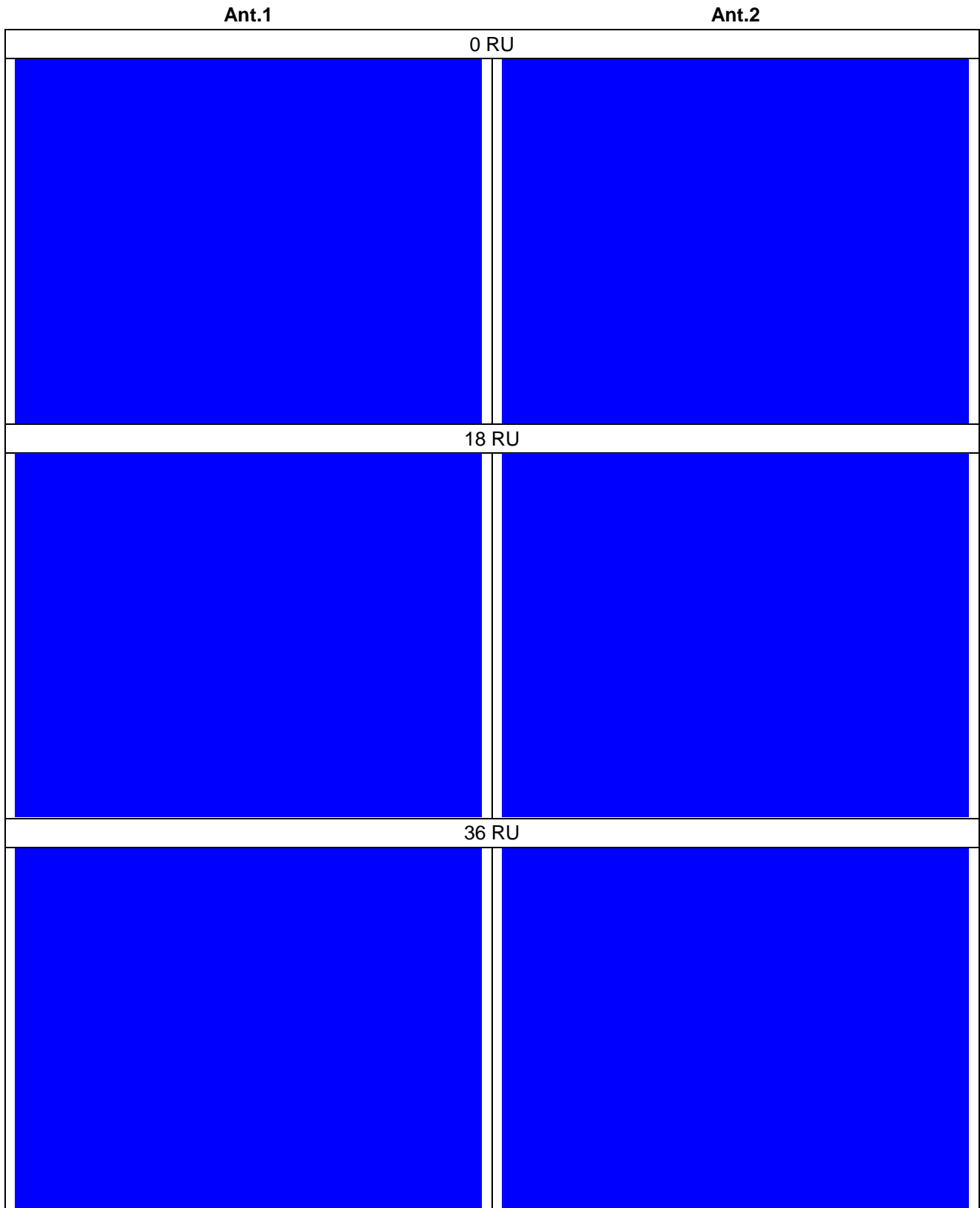
802.11ax_HE80 Band 2C_Low channel_242T



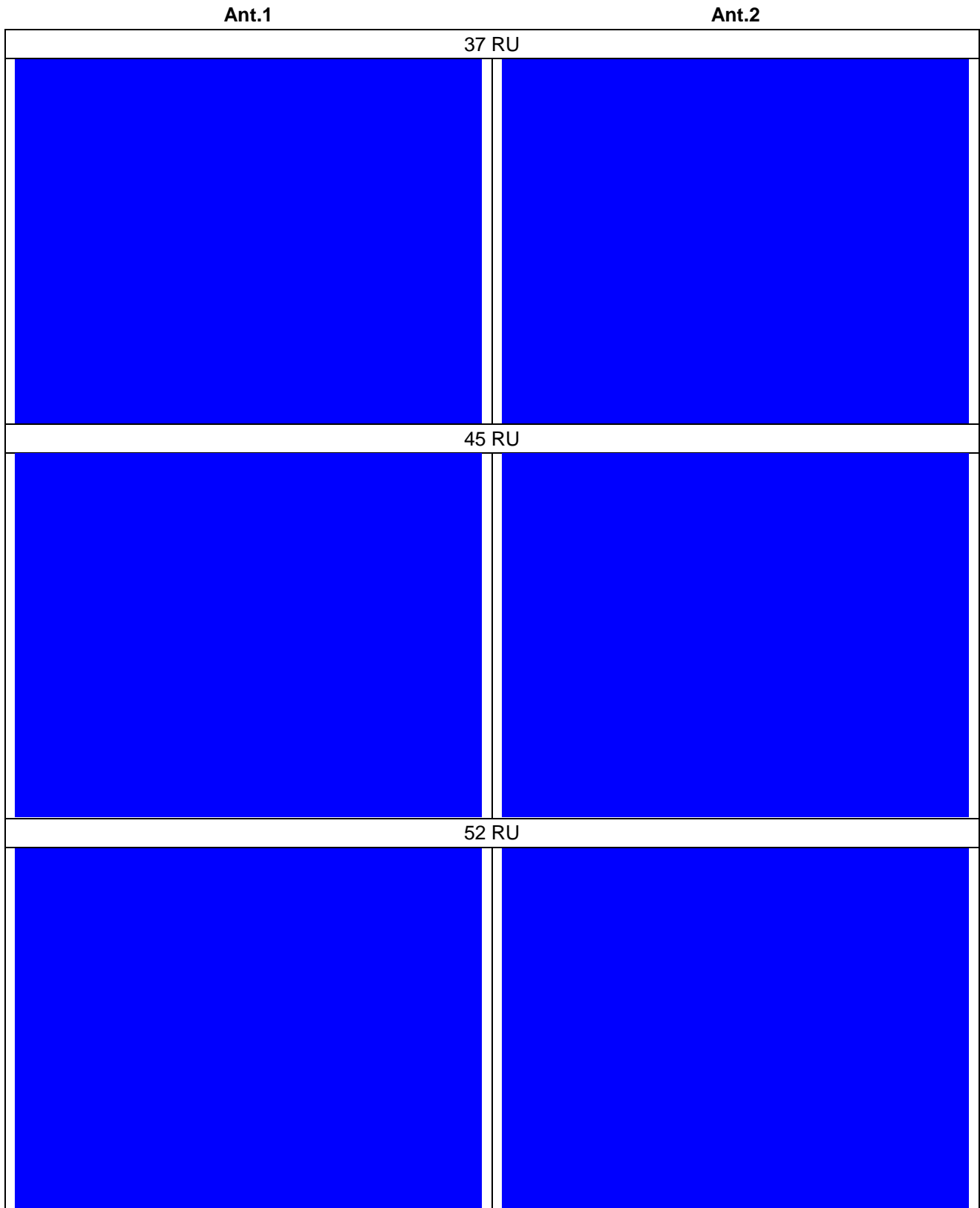
802.11ax_HE80 Band 2C_Low channel_SU



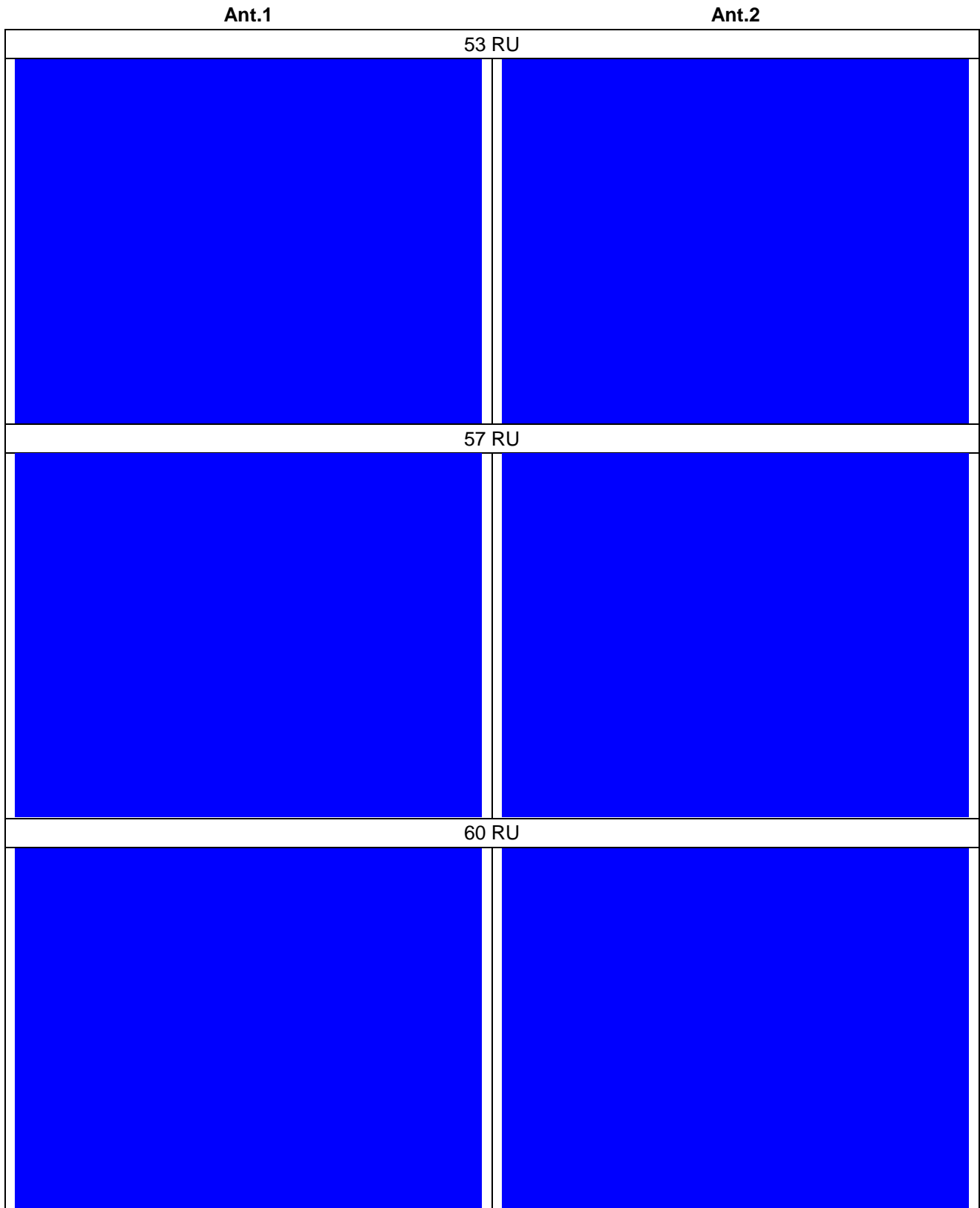
802.11ax_HE80 Band 2C_High channel_26T



802.11ax_HE80 Band 2C_High channel_52T



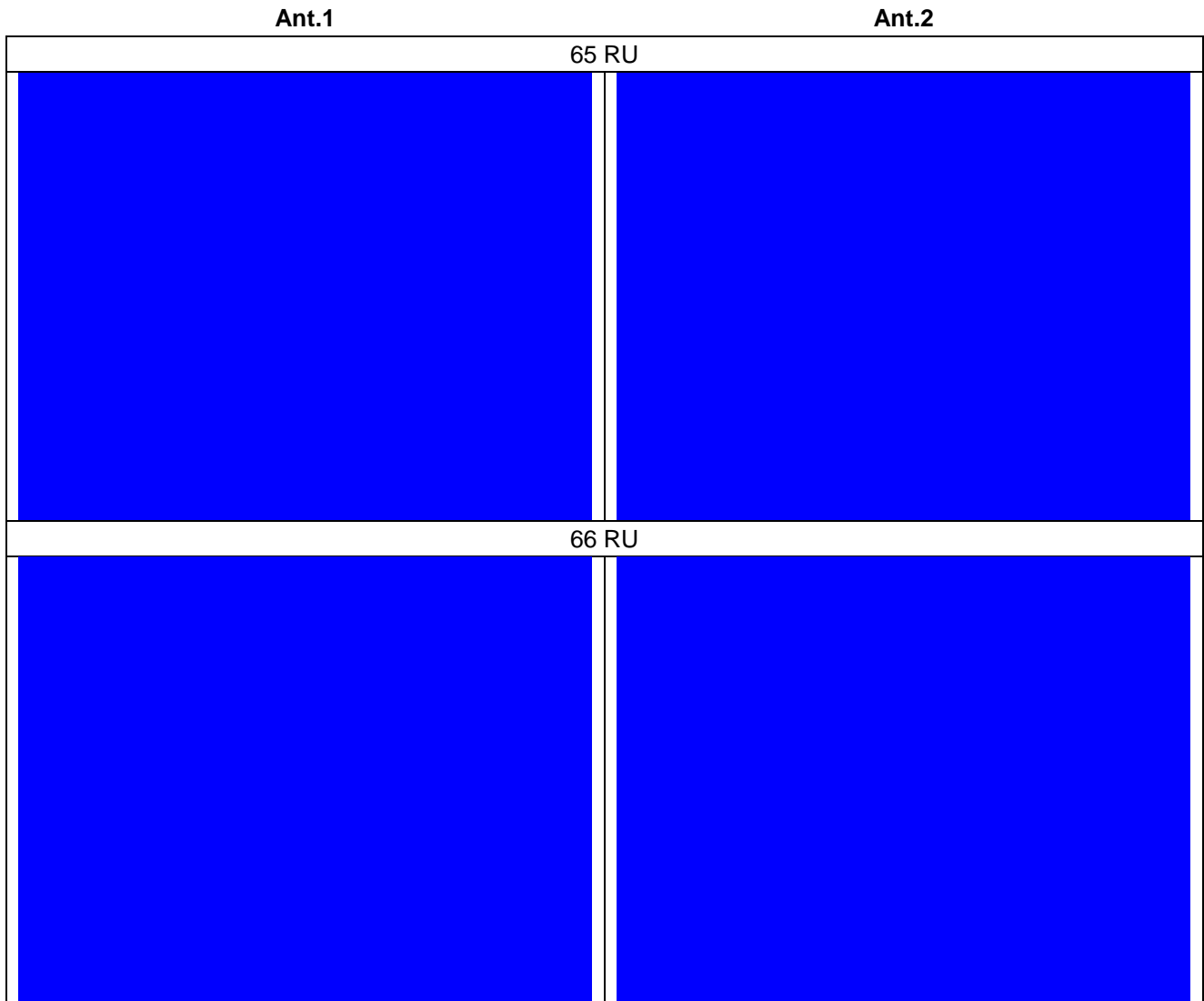
802.11ax_HE80 Band 2C_High channel_106T



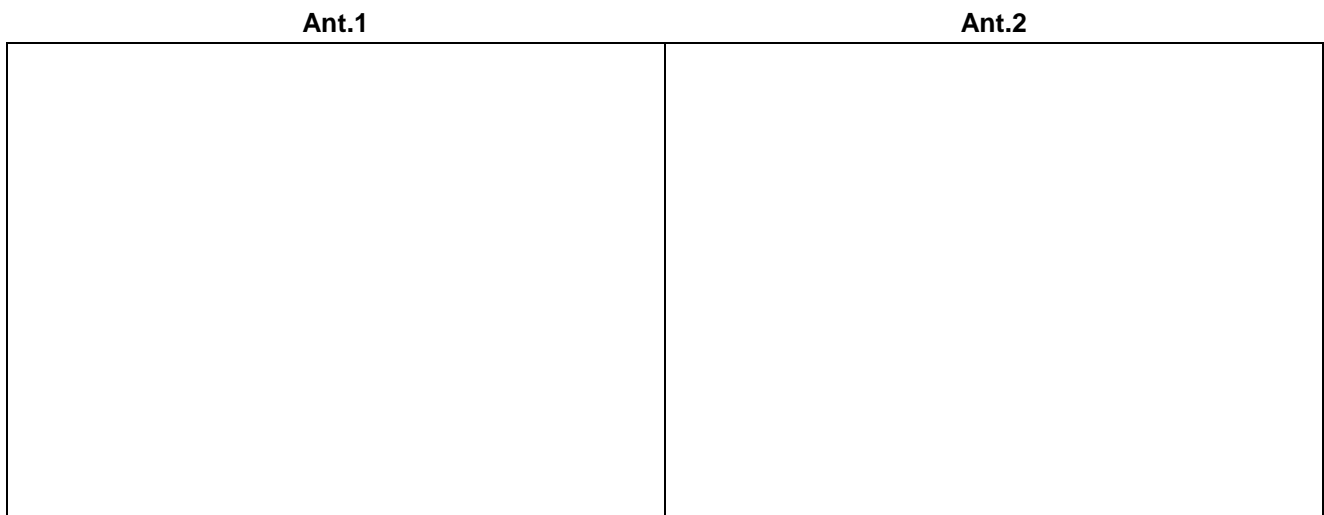
802.11ax_HE80 Band 2C_High channel_242T

Ant.1	Ant.2
61 RU	
62 RU	
64 RU	

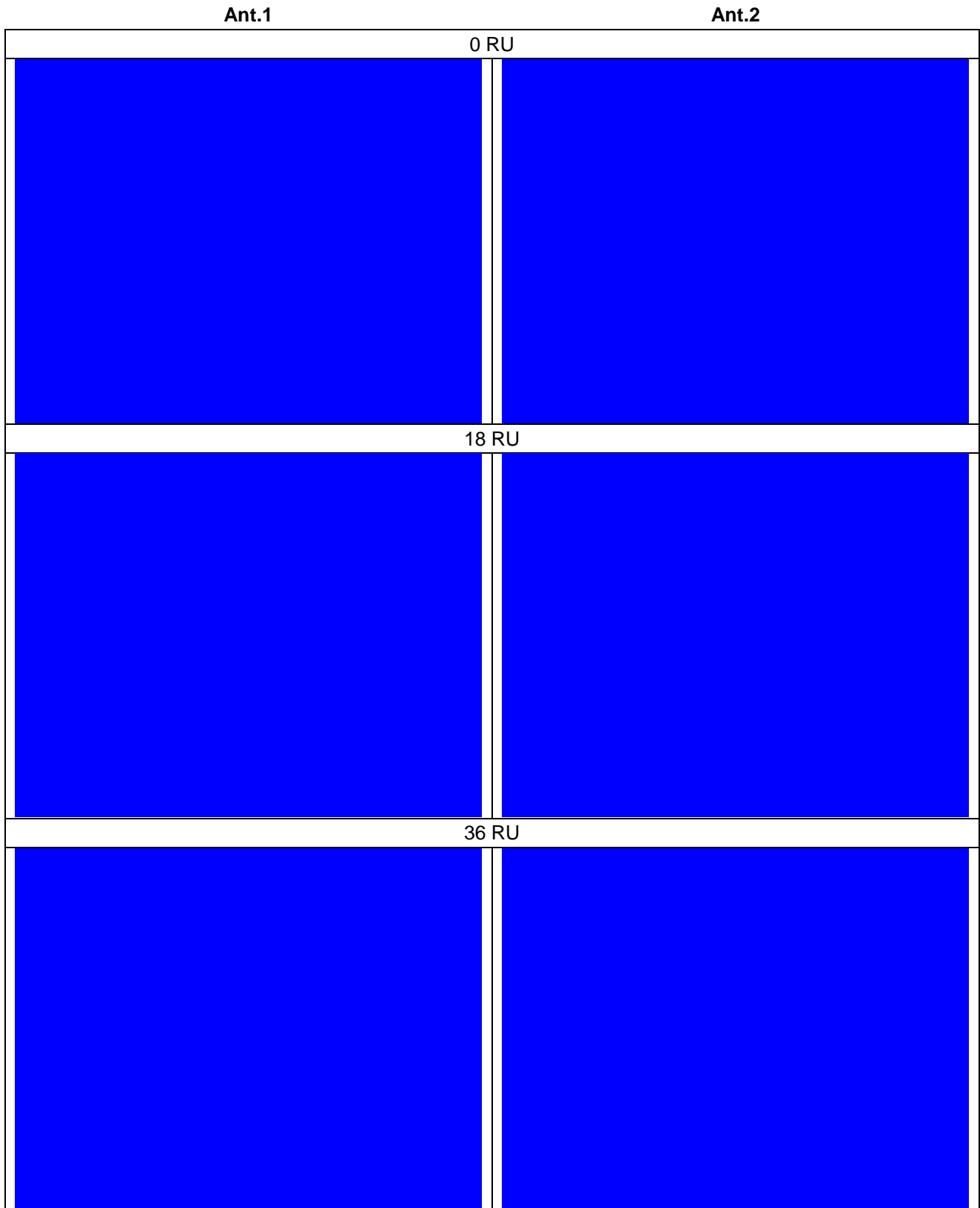
802.11ax_HE80 Band 2C_High channel_242T



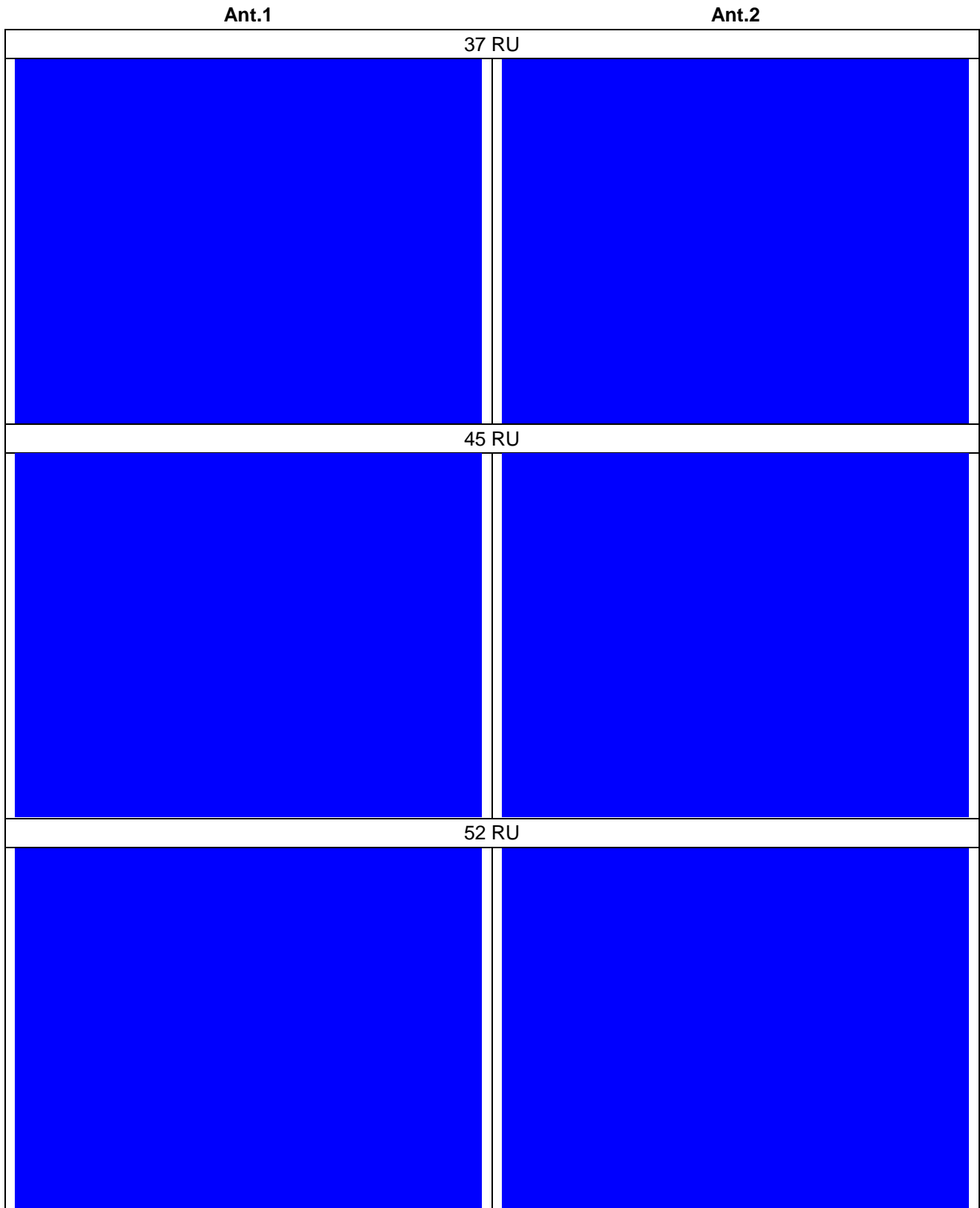
802.11ax_HE80 Band 2C_High channel_SU



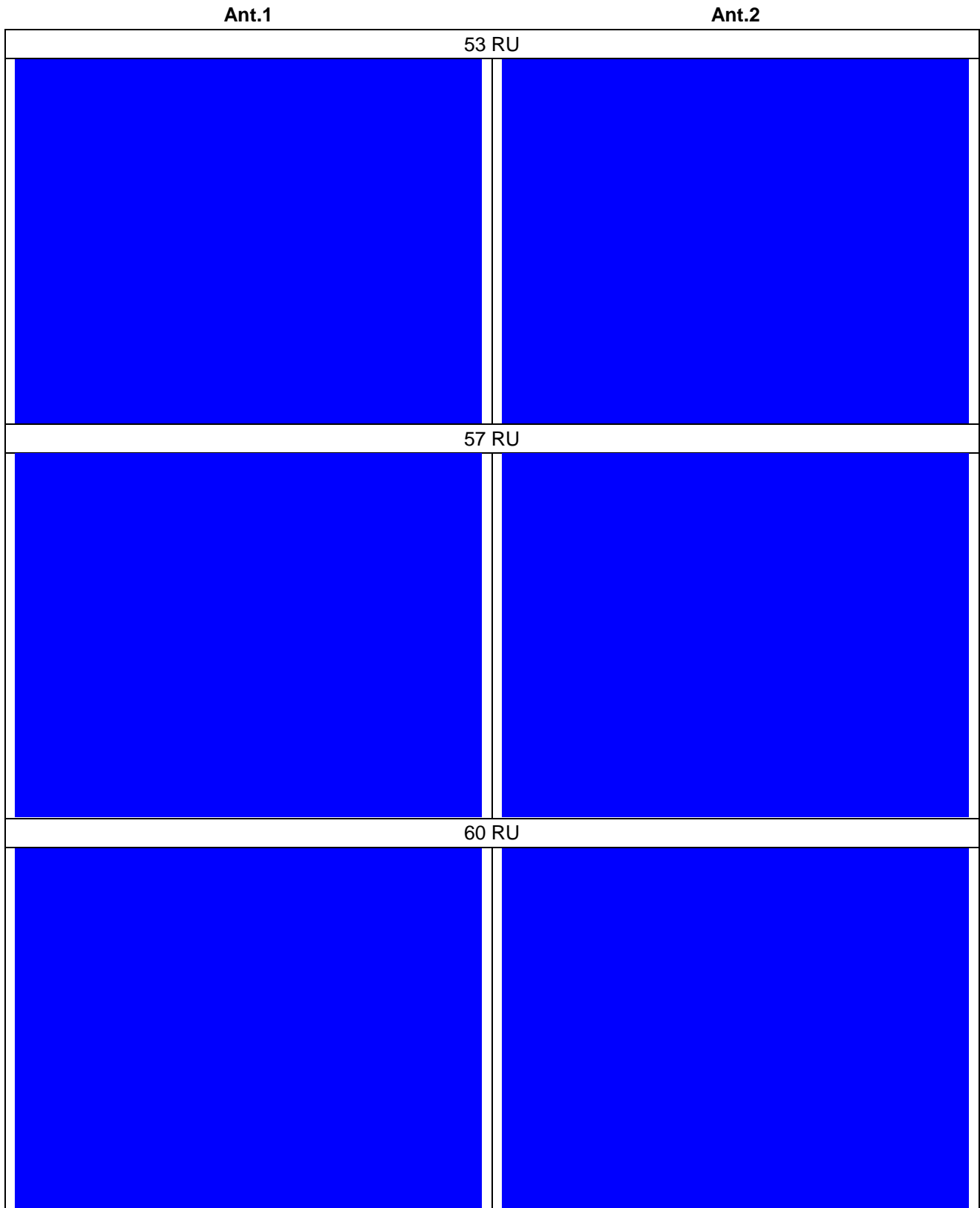
802.11ax_HE80 Band 3_Middle channel_26T



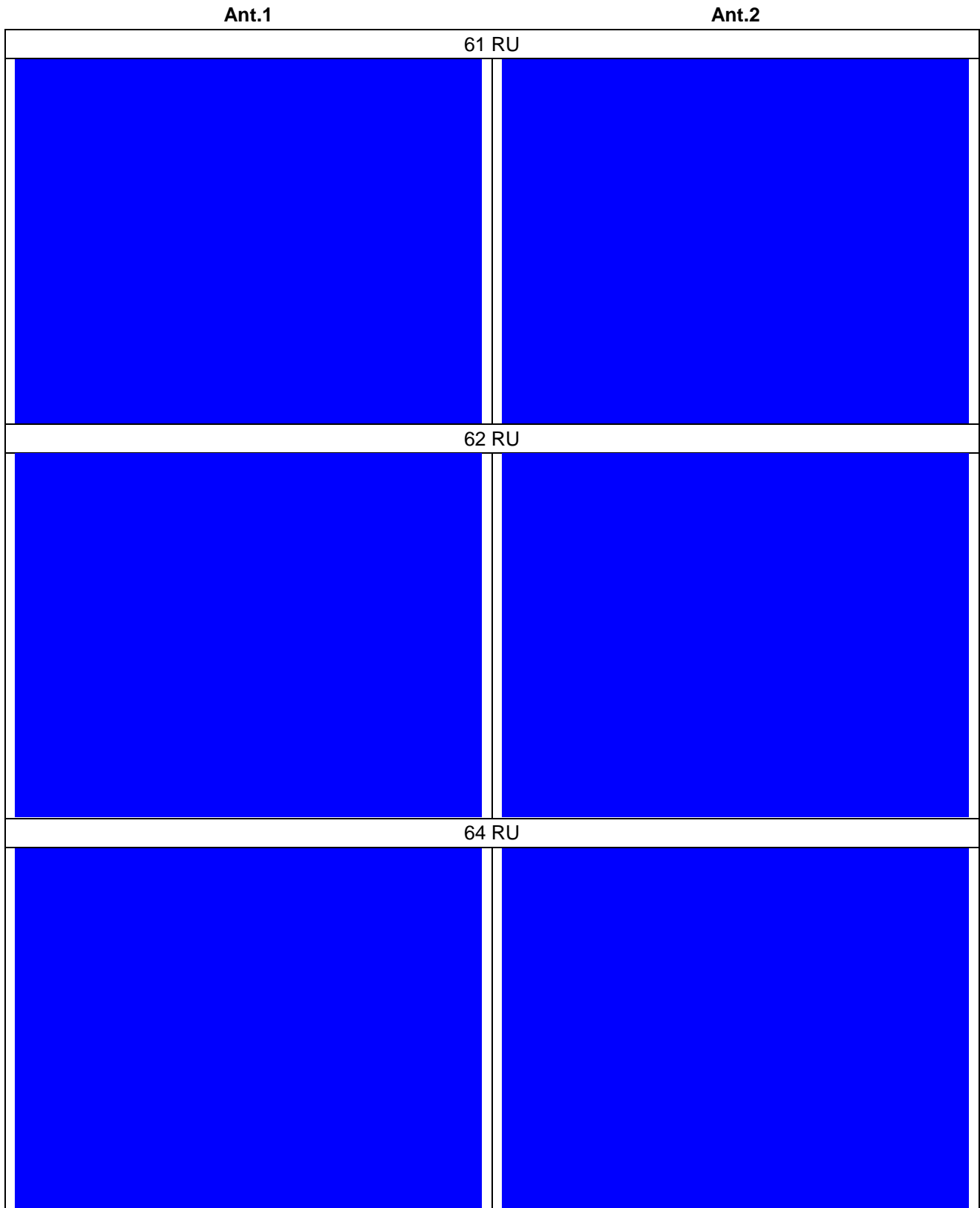
802.11ax_HE80 Band 3_Middle channel_52T



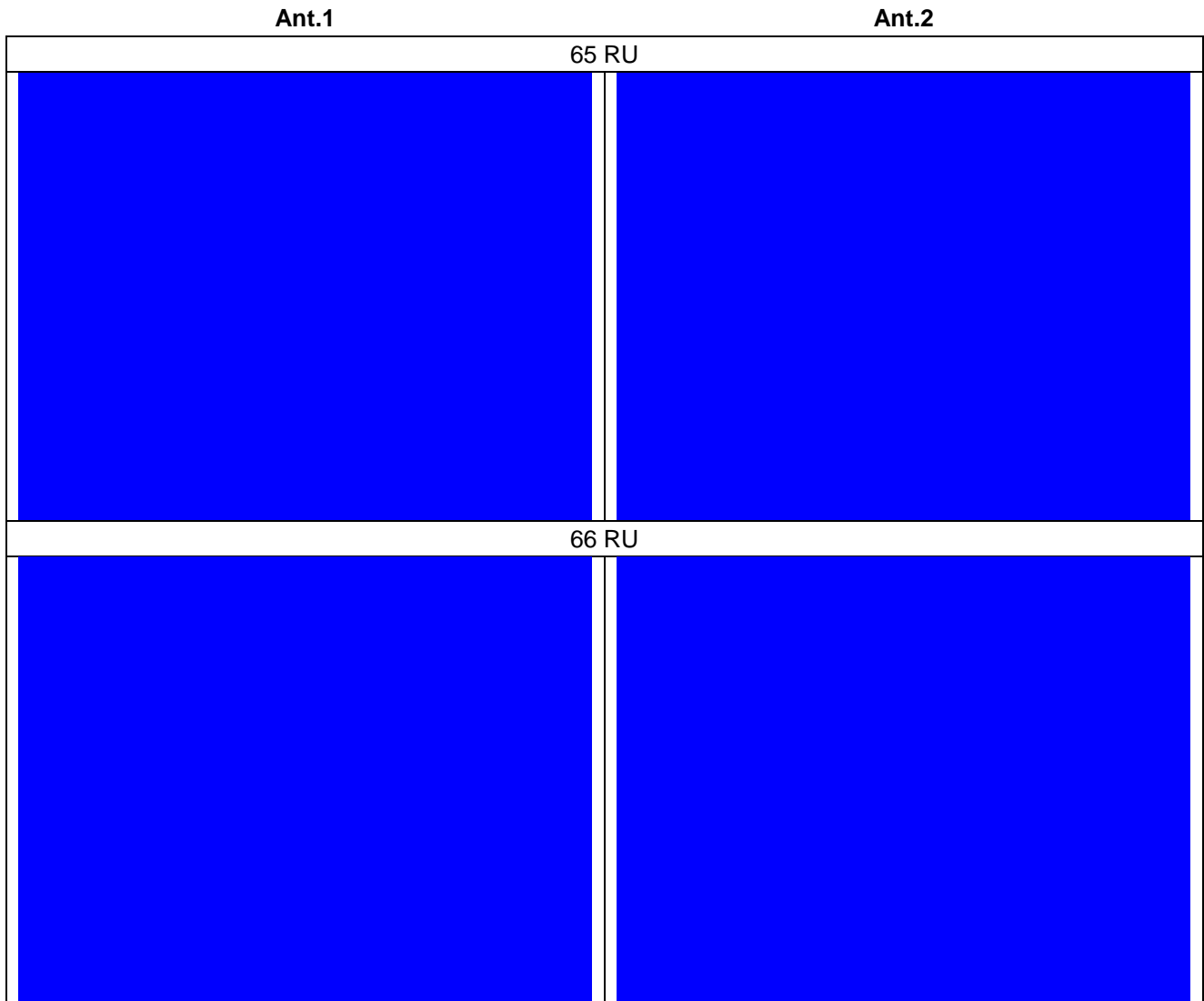
802.11ax_HE80 Band 3_Middle channel_106T



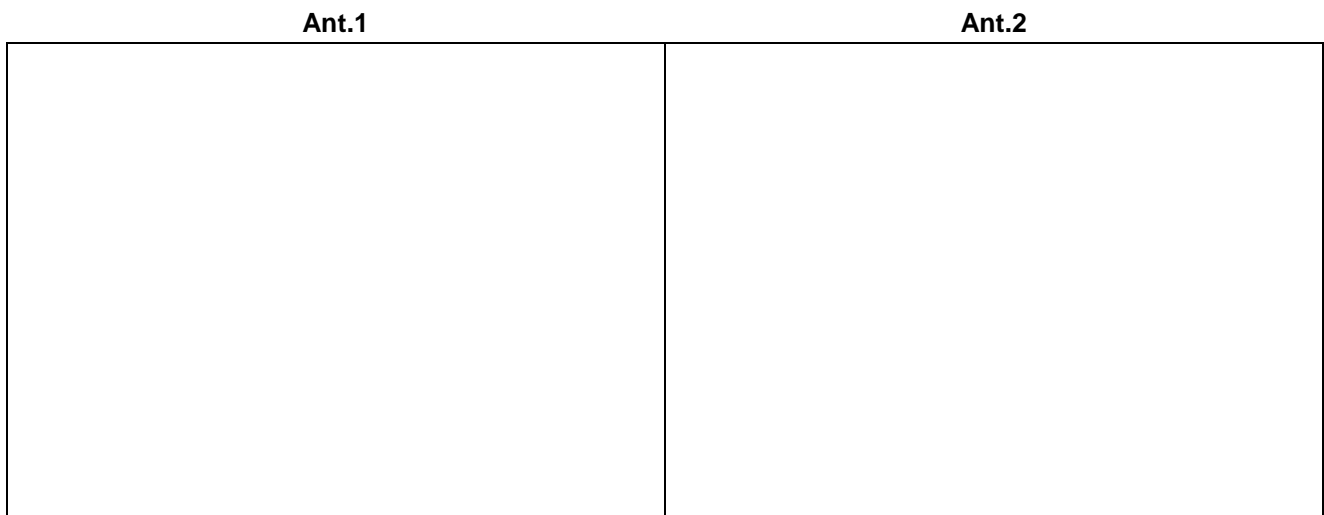
802.11ax_HE80 Band 3_Middle channel_242T



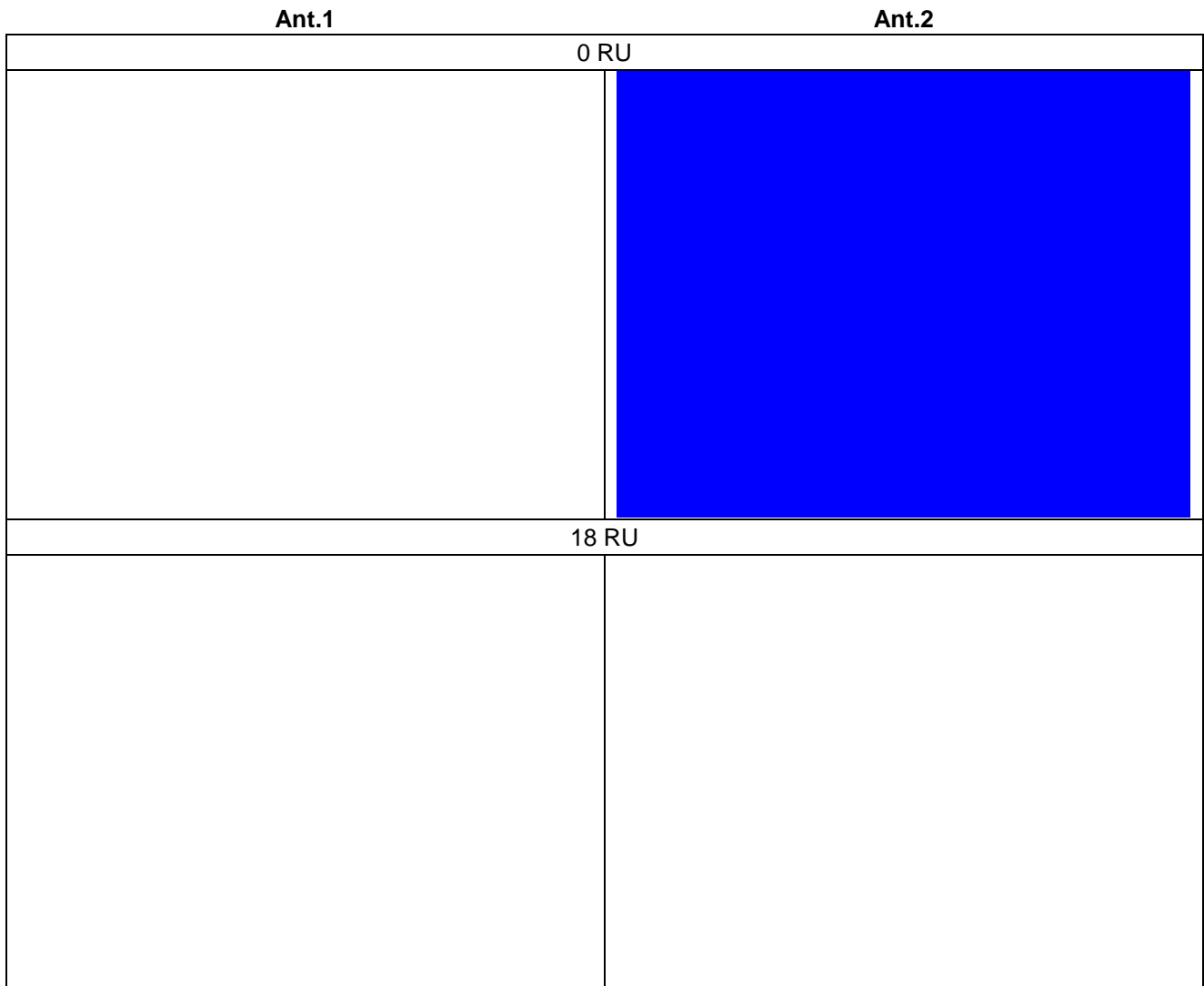
802.11ax_HE80 Band 3_Middle channel_242T



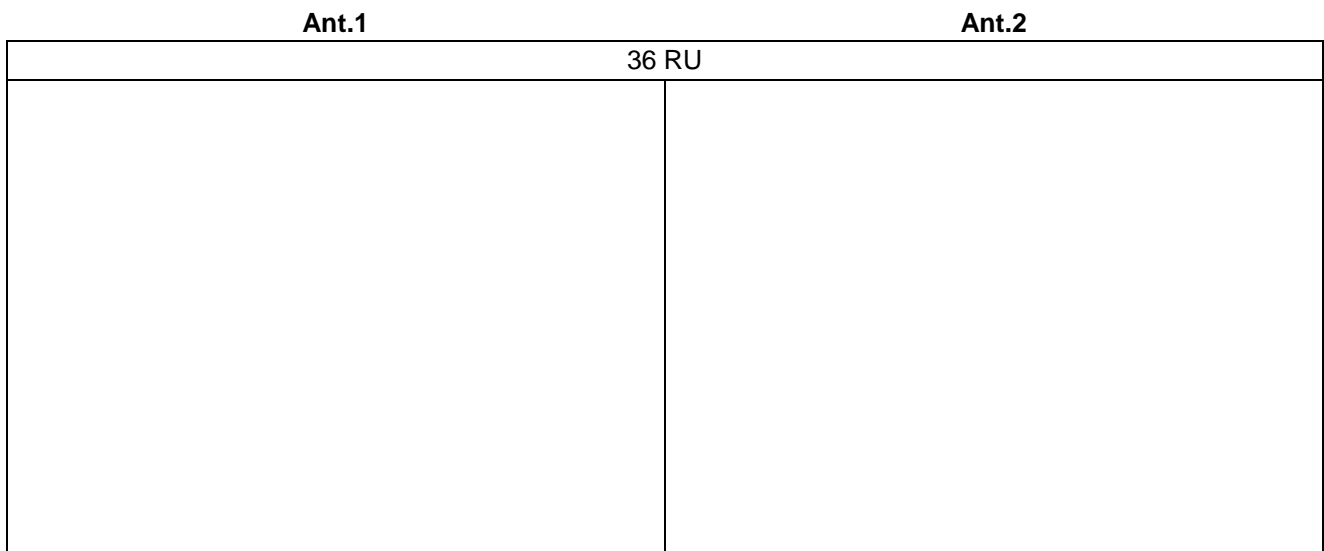
802.11ax_HE80 Band 3_Middle channel_SU



802.11ax_HE80 Band 2C_Straddle channel_26T



802.11ax_HE80 Band 3_Straddle channel_26T





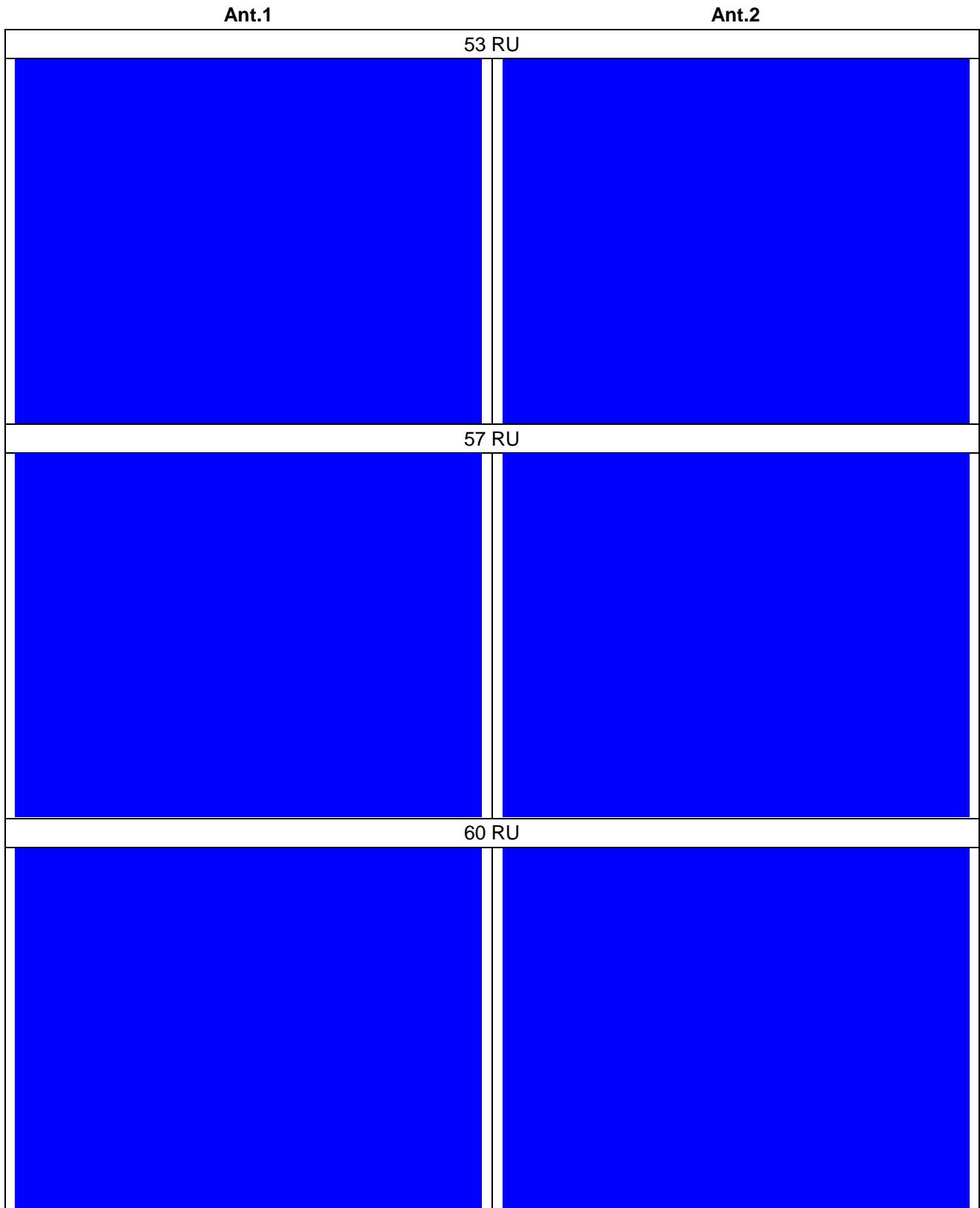
802.11ax_HE80 Band 2C_Straddle channel_52T

Ant.1	Ant.2
37 RU	
45 RU	

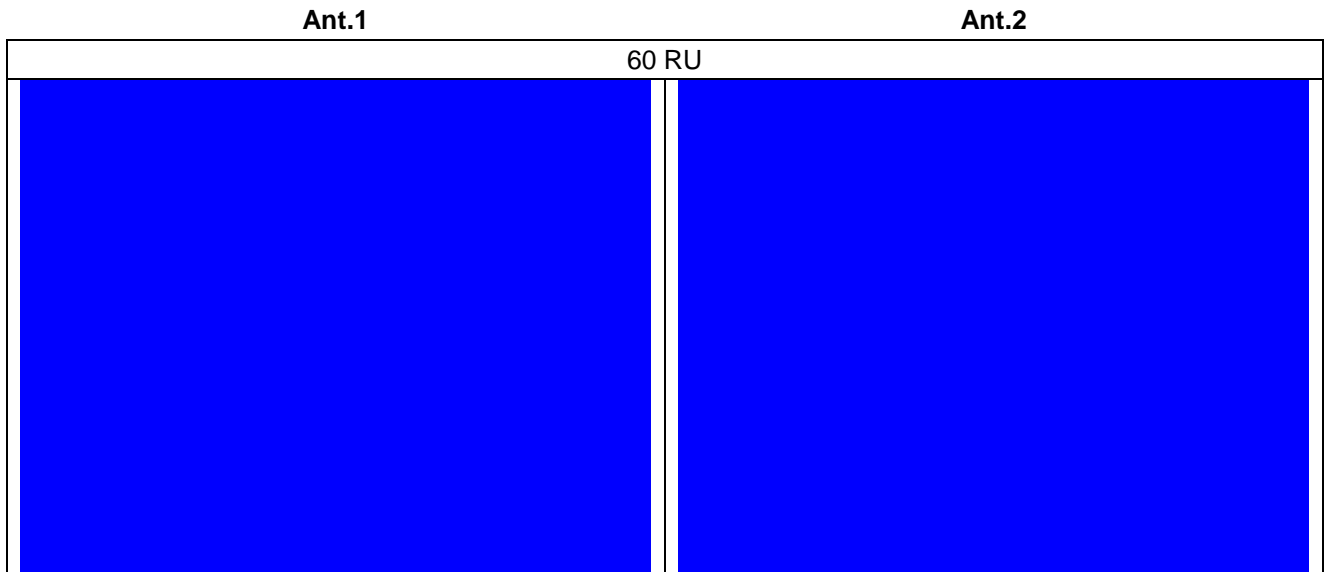
802.11ax_HE80 Band 3_Straddle channel_52T

Ant.1	Ant.2
52 RU	

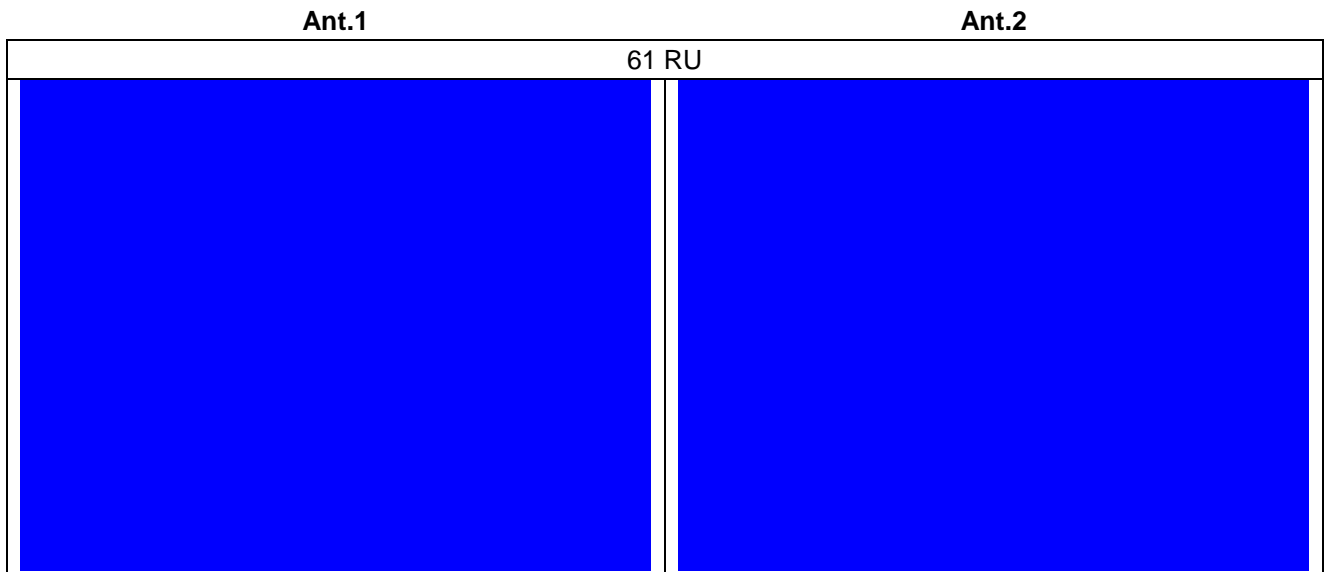
802.11ax_HE80 Band 2C_Straddle channel_106T



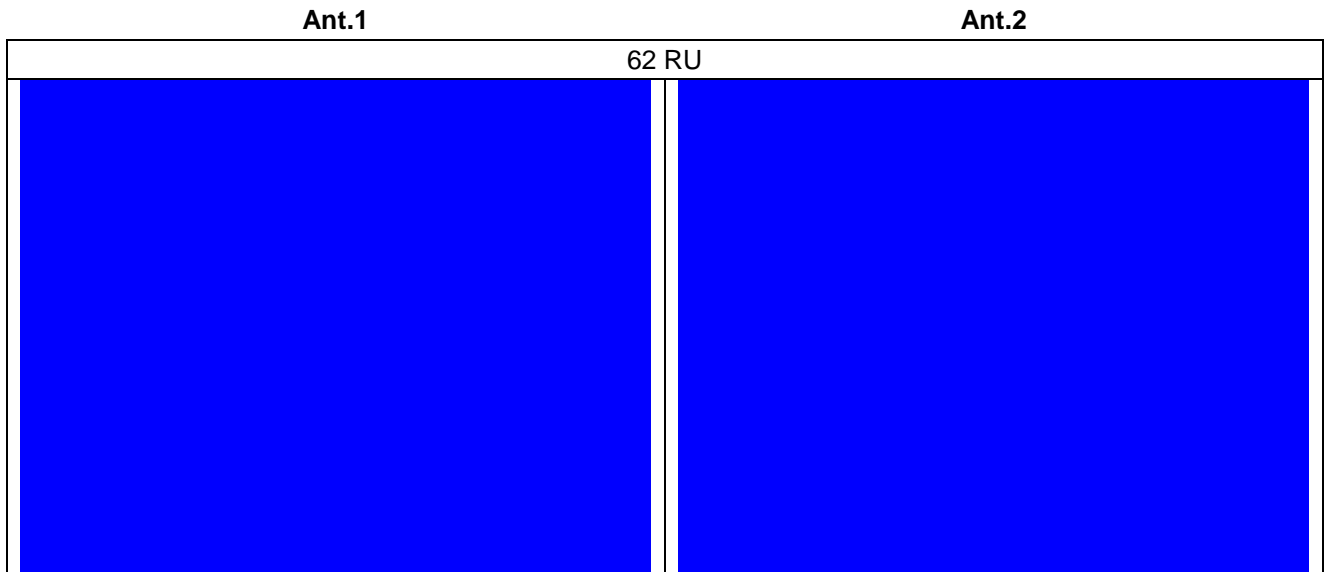
802.11ax_HE80 Band 3_Straddle channel_106T



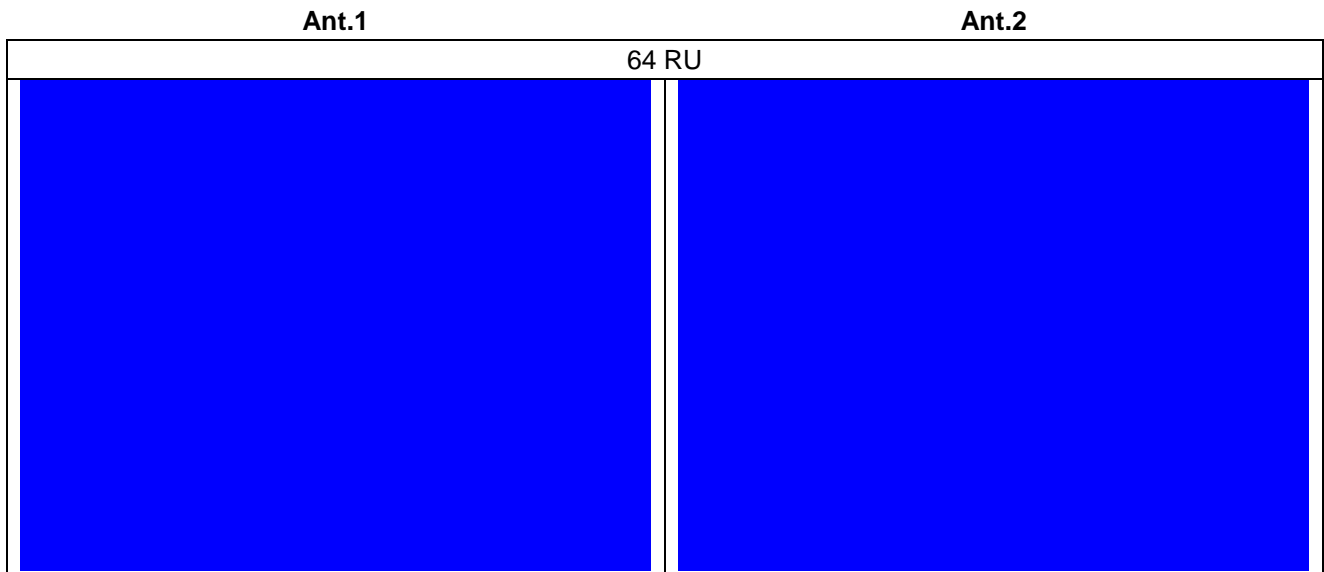
802.11ax_HE80 Band 2C_Straddle channel_242T



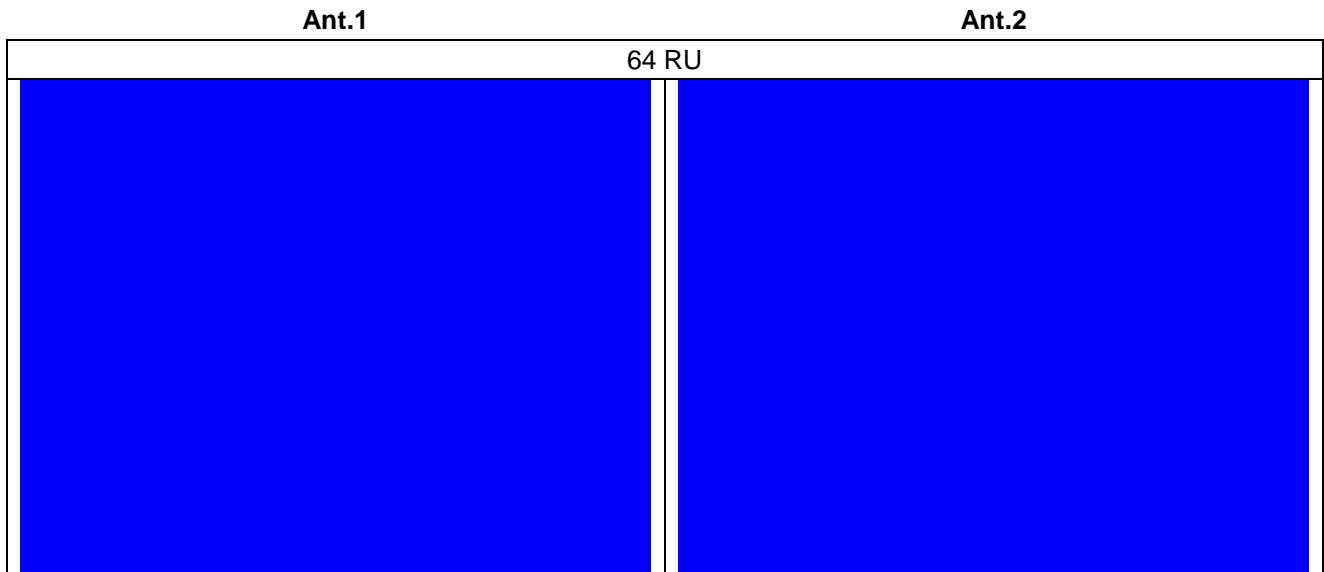
802.11ax_HE80 Band 2C_Straddle channel 242T



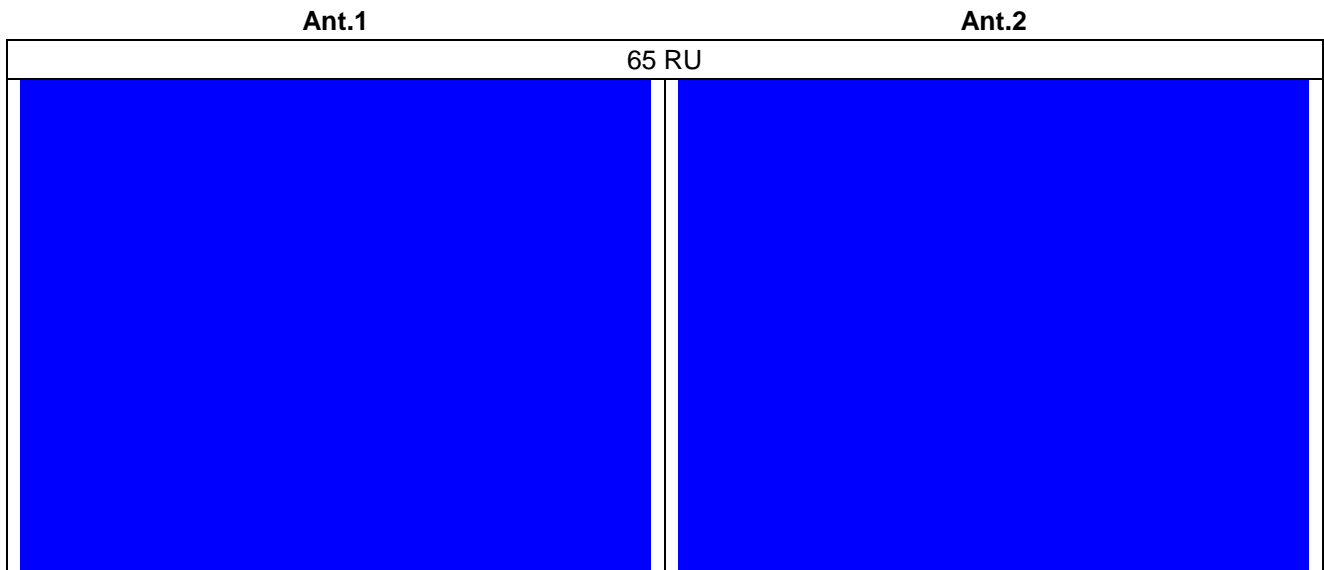
802.11ax_HE80 Band 2C_Straddle channel_242T



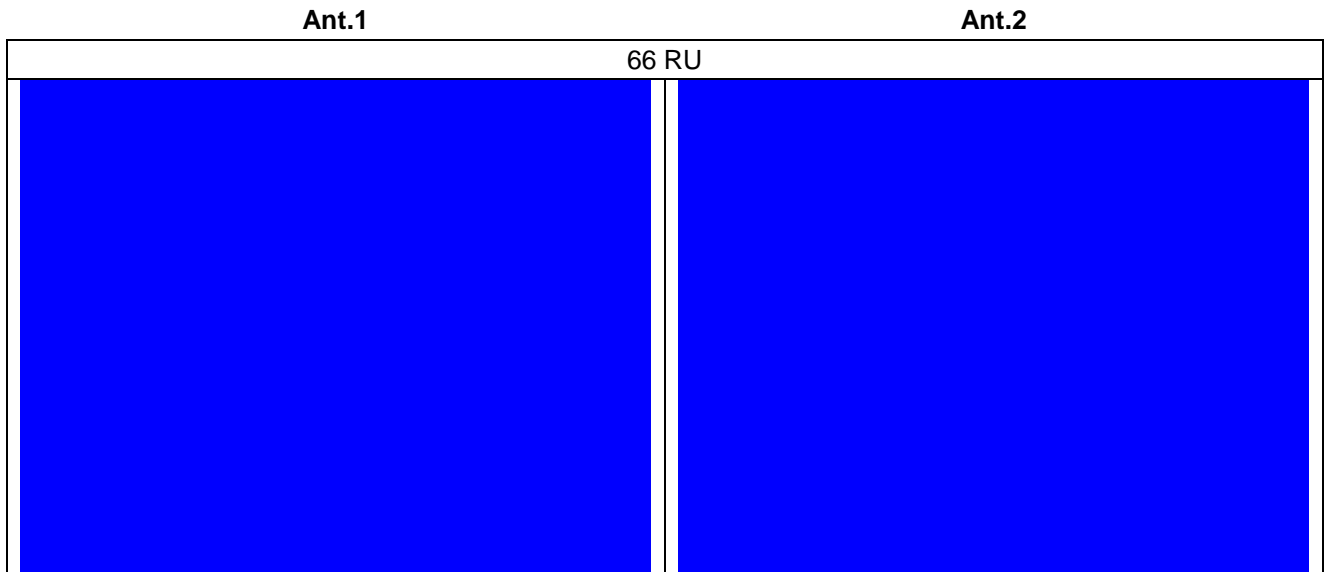
802.11ax_HE80 Band 3_Straddle channel_242T



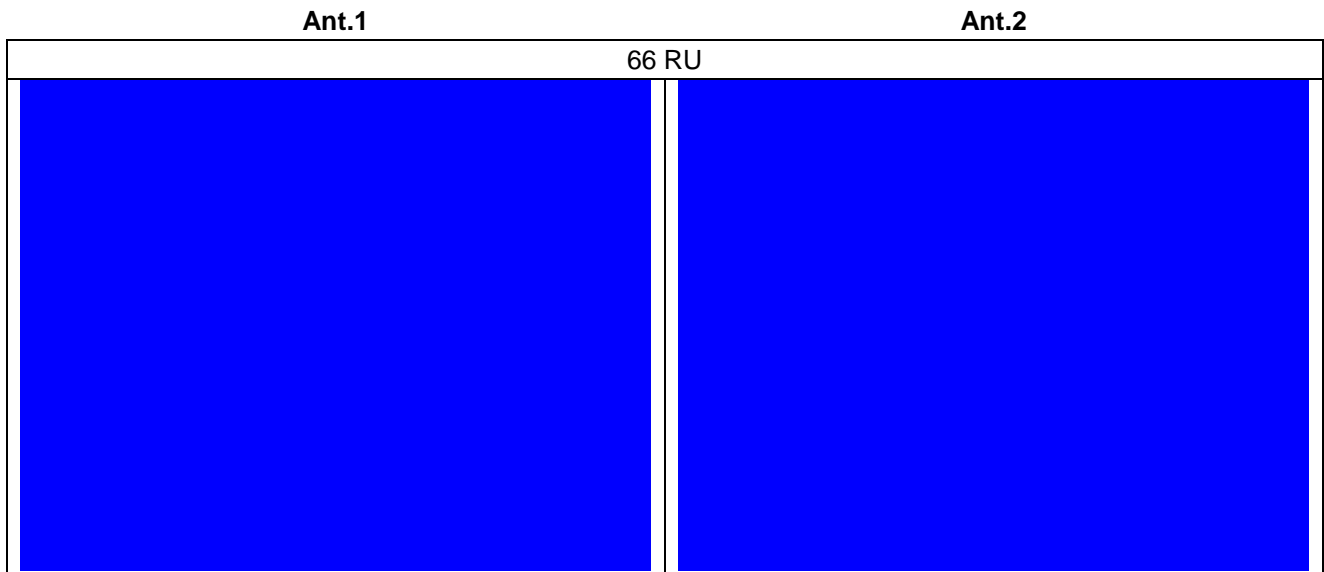
802.11ax_HE80 Band 2C_Straddle channel_484T



802.11ax_HE80 Band 2C_Straddle channel_484T



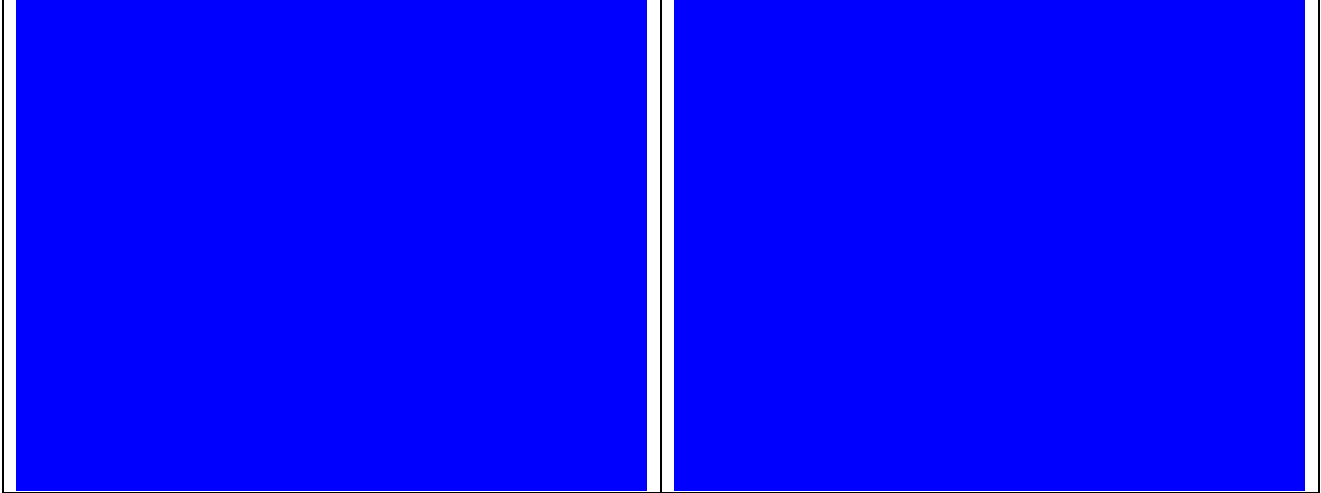
802.11ax_HE80 Band 3_Straddle channel_484T



802.11ax_HE80 Band 2C_Straddle channel_SU

Ant.1

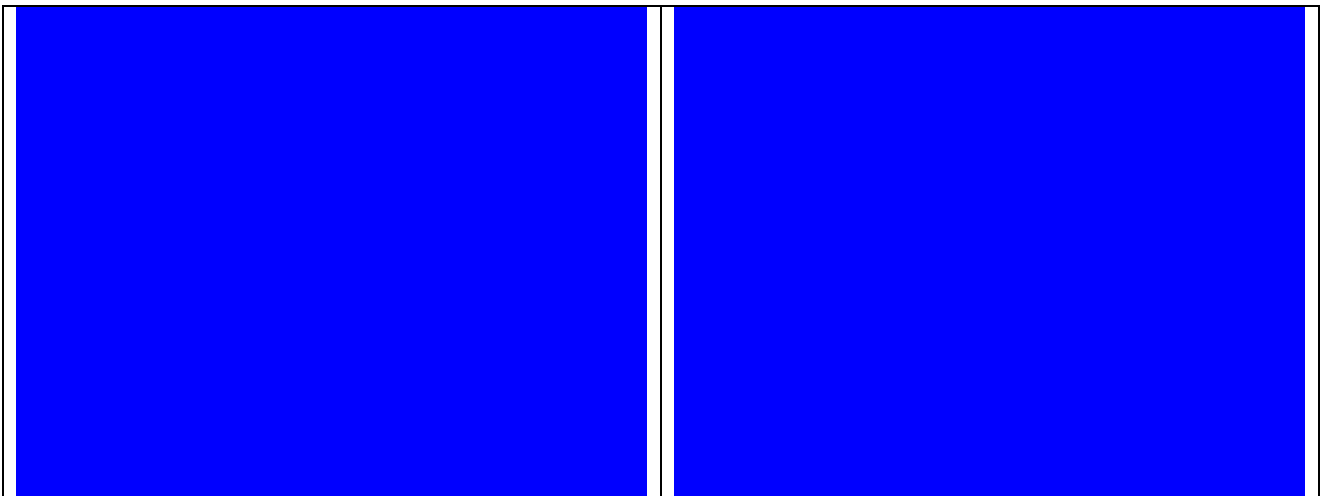
Ant.2



802.11ax_HE80 Band 3_Straddle channel_SU

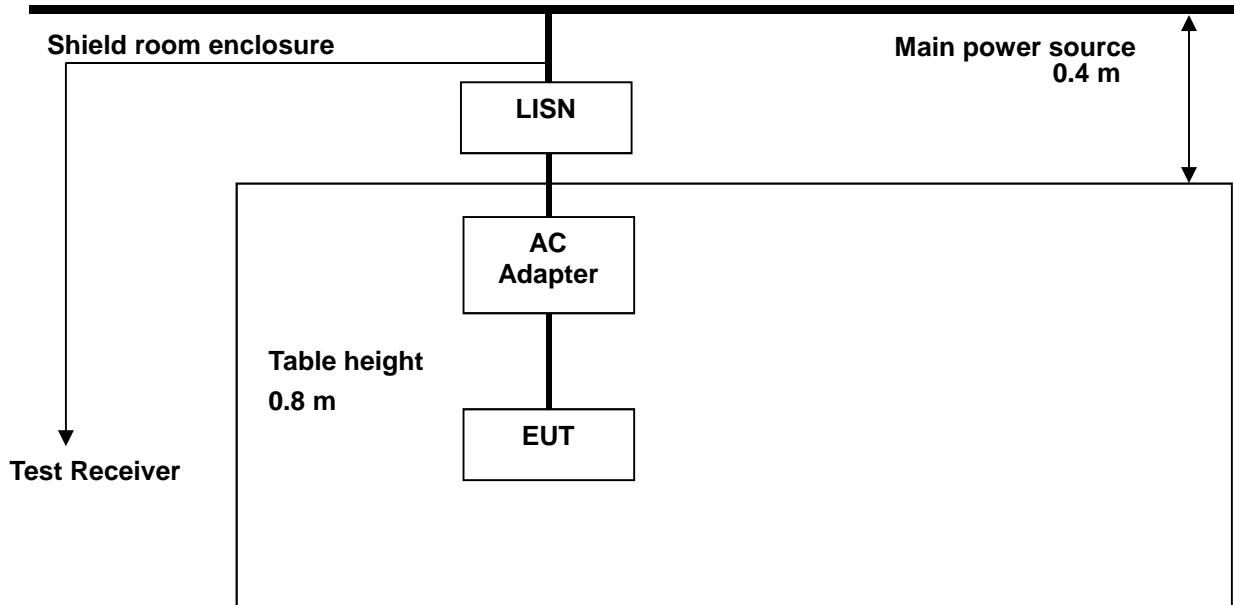
Ant.1

Ant.2



7. AC Conducted Power Line Emission

7.1. Test Setup



7.2. Limit

According to §15.207(a), for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μ H / 50 ohms line impedance stabilization network (LISN).

Compliance with the provision of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

Frequency of emission (MHz)	Conducted limit (dB μ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

7.3. Test Procedures

AC conducted emissions from the EUT were measured according to the dictates of ANSI C63.10-2013

1. The test procedure is performed in a 6.5 m × 3.5 m × 3.5 m (L × W × H) shielded room. The EUT along with its peripherals were placed on a 1.0 m (W) × 1.5 m (L) and 0.8 m in height wooden table and the EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane.
2. The EUT was connected to power mains through a line impedance stabilization network (LISN) which provides 50 ohm coupling impedance for measuring instrument and the chassis ground was bounded to the horizontal ground plane of shielded room.
3. All peripherals were connected to the second LISN and the chassis ground also bounded to the horizontal ground plane of shielded room.
4. The excess power cable between the EUT and the LISN was bundled. The power cables of peripherals were unbundled. All connecting cables of EUT and peripherals were moved to find the maximum emission.

7.4. Test Results

The following table shows the highest levels of conducted emissions on both phase of Hot and Neutral line.

Ambient temperature : (23 ± 1) °C
 Relative humidity : 47 % R.H.

Frequency range : 0.15 MHz - 30 MHz
 Measured Bandwidth : 9 kHz

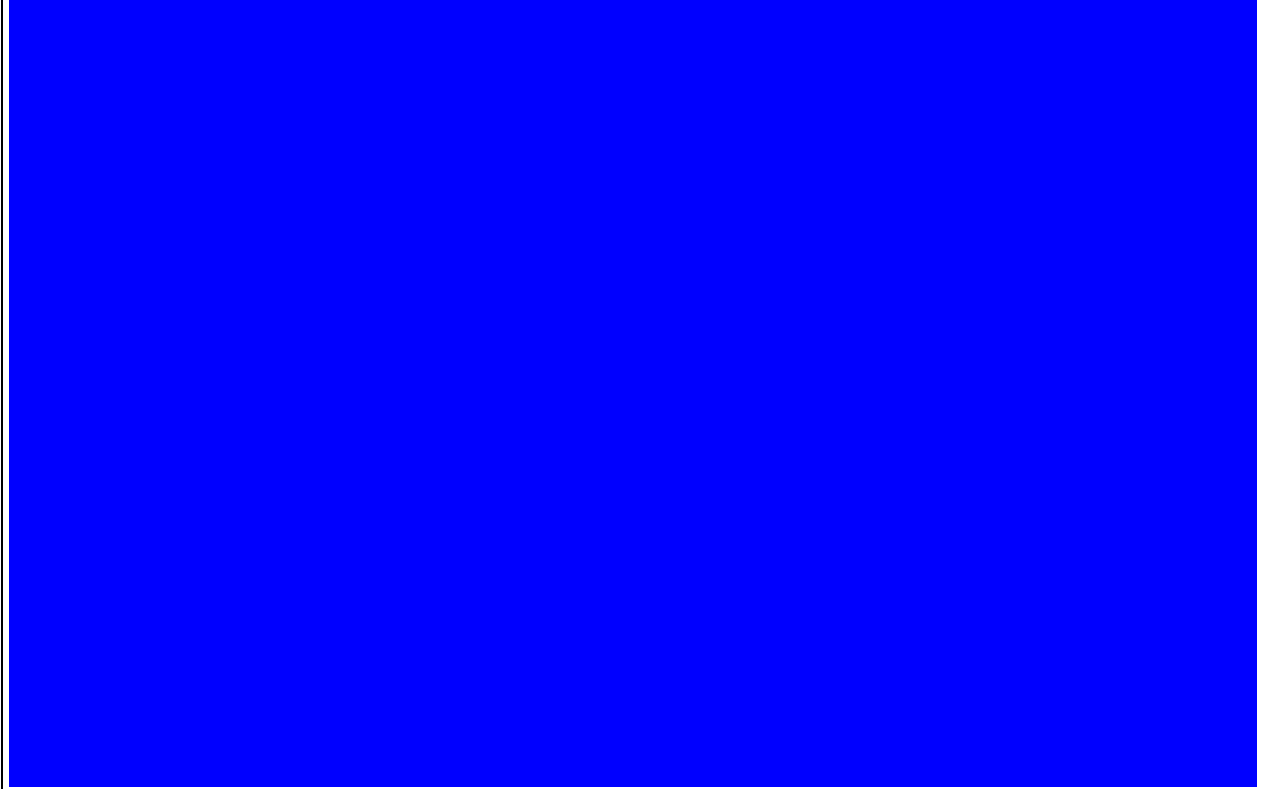
FREQ. (MHz)	LEVEL (dB μ V)		LINE	LIMIT (dB μ V)		MARGIN (dB)	
	Q-Peak	Average		Q-Peak	Average	Q-Peak	Average
0.16	49.40	35.20	N	65.46	55.46	16.06	20.26
0.70	36.30	28.60	N	56.00	46.00	19.70	17.40
1.63	31.80	17.60	N	56.00	46.00	24.20	28.40
4.09	41.90	24.40	N	56.00	46.00	14.10	21.60
8.70	39.30	24.80	N	60.00	50.00	20.70	25.20
13.10	45.60	30.80	N	60.00	50.00	14.40	19.20
0.16	48.80	35.70	H	65.46	55.46	16.66	19.76
0.70	39.40	35.50	H	56.00	46.00	16.60	10.50
1.80	34.10	23.90	H	56.00	46.00	21.90	22.10
4.13	41.10	25.70	H	56.00	46.00	14.90	20.30
8.76	36.50	23.50	H	60.00	50.00	23.50	26.50
13.17	42.10	28.80	H	60.00	50.00	17.90	21.20

Remark;

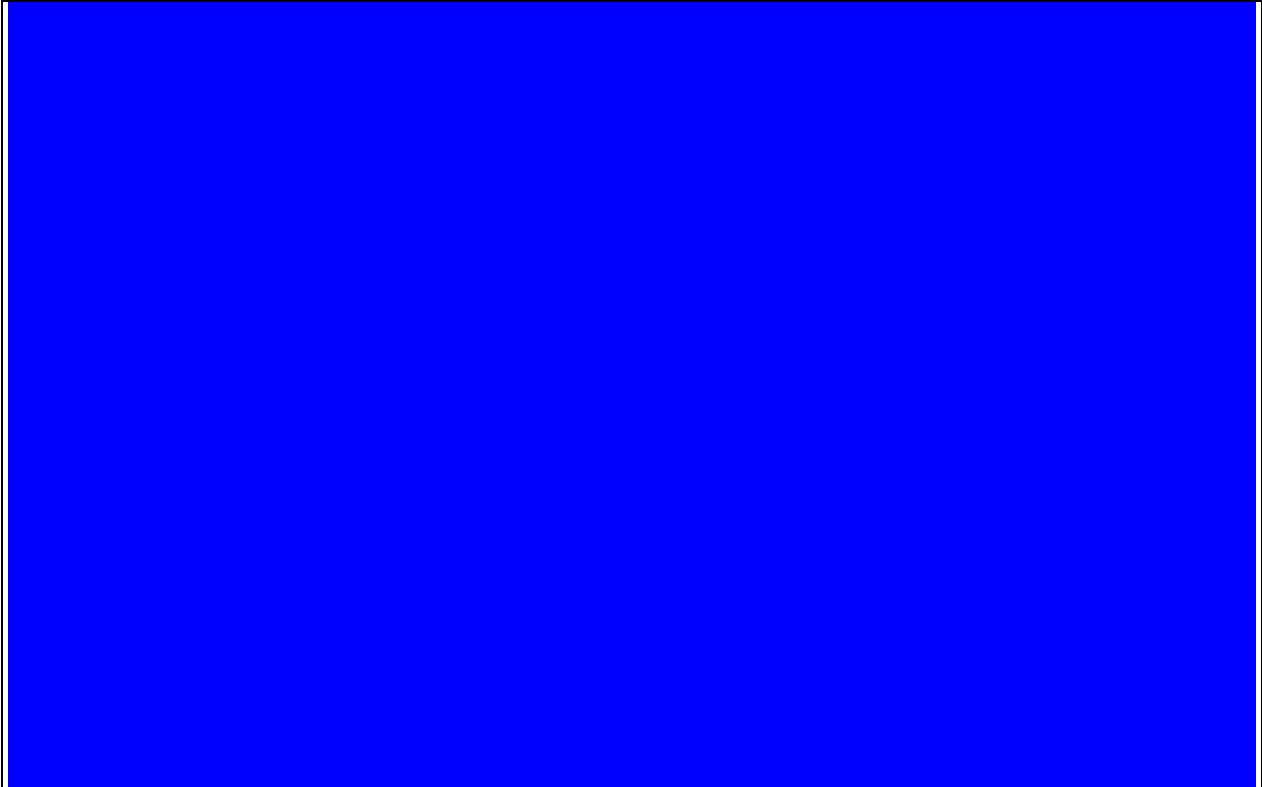
1. Line (H): Hot, Line (N): Neutral.
2. All data rates and modes of operation were investigated and the worst-case emissions were reported using **11ax MIMO(Band 2A) / Middled channel / 242T / 61 RU.**
3. The limit for Class B device(s) from 150 kHz to 30 MHz are specified in Section of the Title 47 CFR.
4. Traces shown in plot were made by using a peak detector and average detector.
5. Deviations to the Specifications: None.

- Test plots

Test mode: (Neutral)



Test mode: (Hot)



8. Antenna Requirement

8.1. Standard Applicable

For intentional device, according to FCC 47 CFR Section §15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section §15.407(a) if transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dBi that the gain of the antenna exceeds 6 dBi.

8.2. Antenna Connected Construction

Antenna used in this product is Metal Frame Antenna and peak max gain of antenna as below.

Band	5 150 MHz ~ 5 250 MHz	5 250 MHz ~ 5 350 MHz	5 470 MHz ~ 5 725 MHz	5 725 MHz ~ 5 850 MHz
Mode	11ax_HE20, 11ax_HE80, 11ax_HE80			
Ant.1 Gain	-6.20 dBi	-5.30 dBi	-4.20 dBi	-4.35 dBi
Ant.2 Gain	-7.20 dBi	-6.80 dBi	-6.90 dBi	-7.90 dBi
Ant.1 + Ant.2 Gain	-3.68 dBi	-3.01 dBi	-2.44 dBi	-2.93 dBi

Unequal antenna gains, with equal transmit powers. For antenna gains given by G_1, G_2, \dots, G_N dBi

(i) If transmit signals are correlated, then

Directional gain = $10 \log\left[\frac{(10^{G_1/20} + 10^{G_2/20} + \dots + 10^{G_N/20})^2}{N_{ANT}}\right]$ dBi [Note the "20"s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]

- End of the Test Report -